UNITED STATES BANKRUPTCY COURT
FOR THE WESTERN DISTRICT OF NORTH CAROLINA
Charlotte Division

In re:	:	Case No. 10-BK-31607
GARLOCK SEALING TECHNOLOGIES, LLC, *et al.*,	:	Chapter 11
Debtors.[1]	:	Jointly Administered

PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW SUBMITTED BY THE OFFICIAL COMMITTEE OF ASBESTOS PERSONAL INJURY CLAIMANTS FOR THE ESTIMATION OF MESOTHELIOMA CLAIMS

[FILED UNDER SEAL]

The Official Committee of Asbestos Personal Injury Claimants, by and through its counsel, hereby submits the Proposed Findings of Fact and Conclusions of Law set forth below for the estimation of pending and future mesothelioma claims against Garlock.[2]

[1] The Debtors are Garlock Sealing Technologies LLC, Garrison Litigation Management Group, Ltd., and The Anchor Packing Company.

[2] The FCR joins with paragraphs 17-20 and 121-132 of the findings of fact and paragraphs 203-205 and 208 of the conclusions of law set forth herein, which relate to the testimony of his expert witnesses.

Respectfully submitted,

Dated: November 1, 2013

CAPLIN & DRYSDALE, CHARTERED

/s/ Trevor W. Swett
Trevor W. Swett III
(tswett@capdale.com)
Leslie M. Kelleher
(lkelleher@capdale.com)
James P. Wehner
(jwehner@capdale)
One Thomas Circle, N.W.
Washington, DC 20005
Telephone: (202) 862-5000

Elihu Inselbuch
(einselbuch@capdale.com)
600 Lexington Avenue, 21st Floor
New York, NY 10022
Telephone: (212) 379-0005

MOON WRIGHT & HOUSTON, PLLC

/s/ Travis W. Moon
Travis W. Moon
(tmoon@mwhattorneys.com)
227 West Trade Street
Suite 1800
Charlotte, NC 28202
Telephone: (704) 944-6560

Co-Counsel for the Official Committee of Asbestos Personal Injury Claimants

MOTLEY RICE LLC

/s/ Nathan D. Finch
Nathan D. Finch
(nfinch@motleyrice.com)
1000 Potomac Street, N.W.
Suite 150
Washington, DC 20007
Telephone: (202) 232-5504

WATERS KRAUS & PAUL

/s/ Jonathan A. George
Jonathan A. George
(jgeorge@waterskraus.com)
Scott L. Frost
(sfrost@waterskraus.com)
222 N. Sepulveda Blvd.
Suite 1900
El Segundo, CA 90245
Telephone: (310) 414-8146

Special Litigation Counsel for the Official Committee of Asbestos Personal Injury Claimants

TABLE OF CONTENTS

This matter comes before the Court on the estimation in the aggregate of pending and future mesothelioma claims against Garlock Sealing Technologies, LLC ("**Garlock**"). The Court has reviewed all of the briefs and supporting materials filed by Garlock, its parent company Coltec Industries, Inc. ("**Coltec**"), the Official Committee of Asbestos Personal Injury Claimants (the "**Committee**"), and Joseph W. Grier, III, as the legal representative for the future asbestos claimants (the "**FCR**"); has heard oral arguments of counsel and the testimony of fact and expert witnesses who testified during the seventeen-day estimation hearing held July 22, 2013 to August 22, 2013 (the "**Hearing**"); and has considered the exhibits and other materials admitted into evidence or otherwise submitted for consideration by the Court. After due deliberation, the Court hereby makes the following Findings of Fact and Conclusions of Law:[3]

I. FINDINGS OF FACT

A. The Evidentiary Record

1. The Court heard live testimony from Charles Wasson, David Garabrant, Thomas Sporn, Larry Liukonen, Frederick Boelter, John Henshaw, David Weill, Lester Brickman, Joseph Radecki, Richard Magee, William Longo, James Shoemaker, Philip Templin, Arnold Brody, Carl Brodkin, Laura Welch, John Turlik, Jorge Gallardo-García, Charles Bates, Paul Hanly, David McClain, Joseph Rice, James Patton, Mark Peterson, Francine Rabinovitz, James Heckman, Elizabeth Anderson, Lambertus Hesselink, and David Glaspy.

2. Pursuant to a stipulated order, the expert reports (both initial and rebuttal reports) of the parties' respective financial experts (Karl N. Snow for Garlock, Kenneth W. McGraw for the Committee, and Joseph J. Radecki for the FCR) have been admitted into evidence, along with

[3] Any matter set forth below as a finding of fact that would more properly be considered a conclusion of law is hereby adopted as such, and vice versa.

the depositions of those witnesses. Stipulation and Order Regarding Testimony of Certain Financial Experts, entered on Sept. 17, 2013 [Dkt. No. 3125].

3. The testimony of the following witnesses has been presented to the Court by designations of depositions or prior court testimony: David Durham, Walter Overstreet, Roy Whittaker, Jimmy Gene Ward, Harry Joe Hyder, Lester Borgen, Ronald Isaacs, Elmer Royer, Robert Maney, Robert Hill, Theodore Cichocki, Jack McNutt, James Heffron, Harold Seltzer, John Sunday, Charles Oxley, James Prange, Bernard Duman, Simon Greenstone 30(b)(6) (Jeffrey Simon), Paul Grant, Elizabeth Barry, Christopher Drake, Brian Henzel, Michael Shepard, Gary Kendall, Belluck & Fox 30(b)(6) (Joseph Belluck), John Dement, Peter Infante, Rust Consulting 30(b)(6) (Rebecca Blake), Rust Consulting 30(b)(6) (Justin Parks), Williams Kherkher 30(b)(6) (Troy Chandler), Melissa Ferrell, Waters & Kraus 30(b)(6) (Peter Kraus), Mark Iola, Shein Law Center 30(b)(6) (Benjamin Shein), Robert Phillips, Tim Hennessy, Richard Magee, Garlock 30(b)(6) (James Heffron), Garlock 30(b)(6) (Tim Hennessy), Garlock 30(b)(6) (Richard Magee), The David Law Firm 30(b)(6) (Stephen Cooper), Ernest Schaub, Tim O'Reilly, William Mahoney, Jeffrey Simon, Samantha Flores, Charles Finley, Julie Strange, Raymond Harris, Roger R. Beckett, Joseph Radecki, and Karl Snow.

4. Garlock has also offered the expert report and deposition testimony of George L. Priest, an expert witness, arguing that, although he sat for deposition despite illness, the illness rendered him unavailable to attend the trial. Professor Priest's report, like that of the other experts, constitutes inadmissible hearsay,[4] and Garlock has not made a sufficient showing of unavailability to make it proper to admit his deposition transcript in lieu of live testimony. In the

[4] At the Hearing, the parties generally agreed that expert reports constitute hearsay that is inadmissible as substantive evidence and may be considered only for the determination of preliminary evidentiary questions pursuant to Fed. R. Evid. 104(a).

absence of in-person testimony, moreover, Professor Priest's opinions would not be sufficiently helpful to the Court as trier of fact to warrant admitting his report or deposition over objection. *See* Fed. R. Evid. 702; *see also Bell v. CSX Transp., Inc.*, 2002 WL 34714566, at *3 (E.D. Mich. Apr. 4, 2001) (excluding opinions of expert asserted to have been unavailable for trial).

5. The parties have submitted a large amount of documentary evidence. In addition to exhibits introduced or referred to at the hearing, Garlock, the Committee and the FCR have each offered large categories of documents gathered in discovery in this proceeding.

6. The following discussion of the testimony given by various witnesses who took the stand at the Hearing, and of the financial experts who testified by deposition, is not meant as a comprehensive restatement of their testimony, but rather as a high-level summary intended to memorialize the identity of each witness, the main subjects he or she addressed, and key points emerging from the testimony. Further particulars of the testimony are cited in connection with the specific proposed findings set out in a later section of these findings.

(i) Experts on Estimation and Related Financial and Economic Topics

Called by Garlock

7. Charles E. Bates, Ph.D. an economist and an econometrician,[5] is the co-founder of the consulting firm Bates White LLC ("**Bates White**"). Dr. Bates was admitted to testify as an expert in economics, econometrics, and asbestos-claim estimation.[6] Garlock asked Dr. Bates to analyze the relationship between Garlock's settlements and its "legal liability," as defined by Garlock's counsel; to forecast Garlock's liability as thus defined for pending and future unknown mesothelioma claims; and to determine whether Garlock's proposed funding would be sufficient under its proposed plan of reorganization.[7] Recalled by Garlock as a rebuttal witness, Dr. Bates gave a critique of the estimates offered by Drs. Rabinovitz and Peterson.

8. Dr. Bates opined that Garlock's historical settlements amounted to multiples of its "legal liability," because it settled cases, not because of any prospect of being found liable, but to avoid greater costs of defense.[8] On stated assumptions, he estimated Garlock's "legal liability" for present mesothelioma claims as less than $25 million and for future mesothelioma claims as less than $100 million.[9] By comparison to these estimates, Dr. Bates expressed confidence that the funding Garlock proposes for its plan (assertedly, $270 million) would be adequate (and indeed, that claimants would uniformly choose the "Settlement Option" rather than the "Litigation Option" under that plan).[10]

---

[5] Hr'g Tr. 2706:17-2707:4, Aug. 2, 2013 (Bates).

[6] *Id*. at 2734:14-16, 22-23.

[7] *Id*. at 2704:19-2705:4, 2705:6-9.

[8] *Id*. at 2705:6-9, 2735:8-14, 2760:12-21.

[9] Hr'g Tr. 2921:5-19, 2974:5-9, Aug. 5, 2013 (Bates).

[10] Hr'g Tr. 2833:23-25, 2846:13-17, 2850:19-22, Aug. 2, 2013 (Bates).

9. The express assumptions underlying Dr. Bates' "legal liability" estimate are that (1) all claims against Garlock would be litigated to conclusion against it and all other responsible entities, (2) the trial court would admit all evidence presented by the litigants on the issue of causation, rather than excluding any such evidence under *Daubert* or similar limitations, and (3) all exposure evidence known or reasonably available to the plaintiff and plaintiff's counsel would be presented.[11] His analysis ignores the massive defense costs that adopting trial, rather than consensual resolutions, as the mode of valuing claims would entail.[12]

10. Dr. Bates described an elaborate series of steps by which he purported to value separately each pending and future claim. Using information gleaned from press accounts of some 367 verdicts won by prevailing plaintiffs (mostly in cases not involving Garlock), he derived assumptions about the total amount of damages that would be awarded to mesothelioma claimants prevailing against any defendant at trial.[13] He then applied a series of assumptions and conclusions that taken together, exonerated Garlock of fully 99 percent of the aggregate liability that he calculated would result from trying all of the claims to conclusion, ignoring the defense costs that trials would impose.[14]

11. In addressing pending claims, Dr. Bates excluded approximately 33 percent of the claims that Garlock's affiliate and co-debtor, Garrison Litigation Management Group Ltd.

[11] *Id*. at 2771:7-2772:3.

[12] In Garlock's actual experience, defense costs fluctuated in the range of 25 percent of its total asbestos-related expenditures in the period 2003-2010. *See* ACC-159. In the five years preceding its bankruptcy, for instance, Garlock spent roughly $140 million in defense costs. See FCR-36 (chart summarizing defense costs). Of course, that level of expense, was in the context of a claims management approach in which Garlock tried only a trivial percentage of the claims against it, settling the bulk of them and dismissing without payment those unsupported by product exposure evidence. Hr'g Tr. 2918:22-2919:4, Aug. 5, 2013 (Bates).

[13] Hr'g Tr. 3908:7-3909:3, Aug. 8, 2013 (Peterson).

[14] *Id*. at 3909:11-3912:11; *see also* Hr'g Tr. 2980:21-25, Aug. 5, 2013 (Bates).

("**Garrison**") recorded as mesothelioma claims in the historical claims database that it maintained for Garlock (the "**Garrison Database**").[15] His rationale for doing so was that some responses given by the holders of those claims to questionnaires issued by Garlock in this proceeding showed that the excluded claims are not for mesothelioma or have been withdrawn.[16] Dr. Bates valued the remaining pending claims by applying a regression analysis that varied the result according to the state in which the claim was filed, the claimant's age at the time of filing, and his or her life status (*i.e.*, living or dead) at that time.[17] Dr. Bates then assigned a zero value for those claims for which Bates White's review of the questionnaire responses and associated materials indicated that the claimants did not assert any contact with Garlock products.[18] For projected future claims, his regression analysis employed the state of filing as the sole variable.[19] For both pending and future claims, Dr. Bates made the assumption that claimants would win no more than 8 percent (and probably less) of trials against Garlock, because that was the "win rate" of claimants who went to verdict against Garlock in the 1990s, when insulation manufacturers were joined in the actions.[20] Dr. Bates also opined that Garlock would be responsible for just 1/36th of the few verdicts that would be rendered against it.[21]

12. In constructing the future stream of Garlock's "legal liabilities," Dr. Bates relied on the "Nicholson-KPMG-Bates White" epidemiological prediction of the incidence of

[15] Hr'g Tr. 2926:25-2927:7, Aug. 5, 2013 (Bates).

[16] Hr'g Tr. 2633:8-2634:1, Aug. 2, 2013 (Gallardo-García).

[17] Hr'g Tr. 2927:8-13, Aug. 5, 2013 (Bates).

[18] *Id.* at 2928:4-19.

[19] *Id*. at 2975:3-10.

[20] *Id*. at 2956:10-23, 2975:11-14; *see also* Hr'g Tr. 3911:24-3912:8, Aug. 8, 2013 (Peterson).

[21] Hr'g Tr. 2936:18-25, Aug. 5, 2013 (Bates); *see also* Hr'g Tr. 2796:5-17, Aug. 2, 2013 (Bates).

mesothelioma in the United States.[22] This approach to forecasting the number and timing of future diagnoses of mesothelioma to be made in the United States derives from a famous study by Dr. William Nicholson, but incorporates adjustments to that study by a consulting group at KPMG (of which Dr. Bates formerly was a member) and further adjustments by Bates White itself.[23] The Bates White adjustment treats roughly one-third of future mesothelioma incidence as having no connection to asbestos, but instead as "idiopathic" in origin.[24] In translating his forecasted stream of Garlock liabilities to net present value, Dr. Bates applied an inflation adjustment of 2.5 percent per annum and discounted the resulting figures at 5.575 percent, which he termed a "risk free rate" based on the Congressional Budget Office's long-term assumptions about inflation and discounting.[25]

13. Dr. Bates acknowledged that no court has ever adopted his estimation approach[26] and that this approach has only been proposed in one other case—the recent estimation conducted in *Bondex*, where Judge Fitzgerald rejected it.[27] Although his estimate was geared to determining what Garlock would owe if claims against it were tried under certain conditions, Dr. Bates admitted that less than one percent of Garlock's cases went to verdict, and that verdicts are neither random nor representative.[28] Dr. Bates advocated the idea that, in estimation, the bankruptcy court should substitute an "alternative information regime" for the tort system as it

[22] Hr'g Tr. 2720:4-7, 2818:15-18, Aug. 2, 2013 (Bates).

[23] Hr'g Tr. 3890:21-3891:5, 3912:23-3913:5, Aug. 8, 2013 (Peterson); Hr'g Tr. 2720:24-2721:7, Aug. 2, 2013 (Bates).

[24] Hr'g Tr. 3913:9-3914:5, Aug. 8, 2013 (Peterson).

[25] Hr'g Tr. 2774:17-2775:3, Aug. 2, 2013 (Bates).

[26] Hr'g Tr. 2992:2-11, Aug. 5, 2013 (Bates).

[27] *Id.* at 2875:13-2876:18.

[28] *Id.* at 2918:15-2919:4, 2920:20-22.

actually exists.[29] Dr. Bates, however, did not rely on any of Garlock's medical or scientific defenses in reaching his conclusions.[30]

14. As foundation for his opinions, Dr. Bates rests on a collection of data assembled by Bates White in what was referred to as the "**Garlock Analytical Database**." A second Bates White representative, Jorge Raúl Gallardo-García, Ph.D., testified that he was responsible for supervising the construction of that database,[31] which includes the Garrison Database as well as other information and discovery materials that Bates White received for use in the estimation proceeding.[32] Dr. Gallardo-García was admitted as an expert in statistical analysis, economic modeling and the construction of databases for those tasks.[33] He testified that the Garlock Analytical Database meets statistical standards of reliability for the work that Dr. Bates performed in this case.[34]

15. Dr. Gallardo-García admitted that in its prepetition estimation work for EnPro Industries Inc. (Garlock's ultimate shareholder) ("**EnPro**"), Bates White followed a more conventional methodology to make "a reliable and reasonable estimate of the aggregate amount of money that Garlock will require to satisfy present and future mesothelioma claims," looking at Garlock's prior claims history and what the company paid in the tort system to resolve those claims, and relying on the Garrison Database.[35] He testified that the Garrison Database is robust

[29] Hr'g Tr. 4846:15-25, Aug. 22, 2013 (Bates).

[30] Hr'g Tr. 2903:11-25, Aug. 5, 2013 (Bates).

[31] Hr'g Tr. 2612:4-5, 2619:19-2620:5, Aug. 2, 2013 (Gallardo-García).

[32] *Id*. at 2624:4-9, 2625:5-2636:10.

[33] *Id*. at 2617:14-17, 2619:12-13.

[34] *Id*. at 2620:16-20.

[35] Id. at 2666:8-19, 2667:15-2668:18.

and contains a significant amount of information.[36] He explained that in the estimation proceeding, however, Dr. Bates is measuring something different.[37] Dr. Gallardo-García returned to the stand as a rebuttal witness and testified that he found errors in the analytical databases of Drs. Peterson and Rabinovitz,[38] flowing chiefly from their use of Garlock's historical claims information rather than data preferred by Bates White and their coding of certain data in ways that Dr. Gallardo-García deemed incorrect.[39]

16. Karl N. Snow, Ph.D. is an economist at Bates White and works in the areas of finance and economics. Although Dr. Bates acknowledges the need to use a risk-free rate for discounting the estimates to net present value, Dr. Snow argued for two alternative discount rates, both of which embody significant credit risk or investment risk rather than simply taking account of the time value of money. First, Dr. Snow offered Garlock's weighted average cost of capital ("**WACC**"), which measures the company's funding costs in light of its capital structure and credit profile.[40] Next, Dr. Snow pointed to the investment returns earned by pension funds, which he analogized to Section 524(g) trusts.[41] Finally, Dr. Snow criticized the financial experts for the Committee and the FCR for accepting a long-term average rate of inflation but insisting on market-based measures of the risk-free rate for discounting purposes, rather than relying on

[36] Hr'g Tr. 2647:18-25, 2679:7-15, Aug. 2, 2013 (Gallardo-García).

[37] *Id*. at 2624:19-22.

[38] Hr'g Tr. 4680:2-8, Aug. 22, 2013 (Gallardo-García).

[39] *Id.*

[40] Rebuttal Report of Karl N. Snow, Ph.D at 31-23, dated April 23, 2013 ("**Snow Rebuttal Report**") (GST-7239). *See* ¶ 2, *supra*.

[41] *Id.* at 32-40.

the long-term average yield on Treasury securities as projected by the Congressional Budget Office.[42]

Called by the FCR

17. Dr. Francine Rabinovitz is the asbestos personal injury claims estimation expert for the FCR.[43] She has experience as an expert witness in bankruptcy estimation proceedings, has projected asbestos personal injury liabilities in other contexts (including for courts, defendants, solvent companies, trusts, and claims facilities), and is a leading expert in her field.[44] Dr. Rabinovitz has also been recognized as an expert by various courts, and her estimations of the number and value of claims have been adopted in several cases.[45] Dr. Rabinovitz was qualified by the Court as an expert in the estimation of asbestos claims and liabilities, subject to Garlock's *Daubert* objection.[46]

18. Dr. Rabinovitz testified as to the amount of money Garlock will require to satisfy present and future mesothelioma claims and criticized Dr. Bates' methodology and conclusions.[47] Dr. Rabinovitz's estimation methodology, which is similar to that of Dr. Peterson, began with an estimate of the size of the population exposed to asbestos.[48] Next, Dr. Rabinovitz estimated the proportion of persons exposed to asbestos who will develop

---

[42] *Id.* at 29-30.

[43] Hr'g Tr. 4146:16-19, Aug. 9, 2013 (Rabinovitz).

[44] *Id.* at 4150:5-4155:1, 4157:1-4160:12.

[45] *Id.* at 4160:23-4162:25.

[46] *Id.* at 4163:16-22. *See* Future Asbestos Claimants' Representative's Opposition to Debtors' Motion to Exclude or Strike Committee and FCR Estimation Expert Witness Opinions, filed on Sept. 27, 2013 [Dkt. No. 3145].

[47] Hr'g Tr. 4147:11-19, 4164:15-19, Aug. 9, 2013 (Rabinovitz).

[48] *Id.* at 4173:25-4174:5.

mesothelioma.[49] Dr. Rabinovitz then forecasted the percentage of this population that is likely to file mesothelioma claims against Garlock in the future, known as the "propensity to sue."[50] Dr. Rabinovitz valued Garlock's pending and future mesothelioma claims by calculating the average indemnity value during a five-year calibration period from 2005 to 2010.[51] Dr. Rabinovitz also estimated the cost of defending asbestos claims by calculating the defense cost share percentage of mesothelioma and lung cancer indemnities, and then applying that percentage to pending and future liability estimates.[52] Finally, using information from the Congressional Budget Office provided by the FCR's financial advisor, Mr. Joseph Radecki, Dr. Rabinovitz adjusted the future mesothelioma claims for inflation, applying a rate of between 1.0 percent and 2.3 percent (depending on the year) for her base case and between .50 percent and 1.8 percent (depending on the year) for her adjusted indemnity case.[53] Dr. Rabinovitz then applied a risk-free discount rate of 2.81 percent, which was also provided by Mr. Radecki and was based on yields in the market for U.S. Treasuries, to determine the net present value of the claims as of the petition date.[54]

19. Dr. Rabinovitz estimated that the amount of money that Garlock will need to resolve pending and future mesothelioma claims is approximately $1.217 billion to $1.292 billion net present value, including defense costs.[55] Exclusive of defense costs, Dr. Rabinovitz's estimate is between $913.4 million and $969.5 million.

---

[49] *Id.* at 4178:14-21.

[50] *Id.* at 4180:11-16.

[51] *Id.* at 4186:1-5.

[52] *Id.* at 4191:13-4192:13.

[53] *Id.* at 4195:25-4196:9; FCR-42, at 34 (Rabinovitz Demonstrative PowerPoint).

[54] Hr'g Tr. 4195:25-4196:9, 4197:7-24, Aug. 9, 2013 (Rabinovitz).

[55] *Id.* at 4222:21-23.

20. Mr. Joseph Radecki is a Managing Director of Lincoln International, a global investment bank, and the FCR's financial advisor in this case.[56] Mr. Radecki was accepted, without objection, as an expert in determining appropriate inflation and discount rates for net present value calculations.[57] Mr. Radecki testified regarding the appropriate inflation rate for Dr. Rabinovitz to use in calculating the undiscounted amounts of Garlock's future mesothelioma liabilities in her base case.[58] Mr. Radecki also testified regarding the appropriate discount rate for use in converting the nominal amounts of the future mesothelioma liabilities in Dr. Rabinovitz's projection to net present values. Mr. Radecki testified that he determined the appropriate "risk-free" discount rate in this case by identifying the point on the yield curve for U.S. Treasury securities that correlates to the "weighted average life" of the future mesothelioma liabilities in Dr. Rabinovitz's projection.[59]

[56] Hr'g Tr. 1340:10-1341:5, July, 26, 2013 (Radecki).

[57] *Id.* at 1345:9-13.

[58] *Id.* at 1346:11-20.

[59] *Id.* at 1349:19-1350:9, 1352:17-18, 1353:7-13.

Called by the Committee

21. Mark A. Peterson, Ph.D. is the Committee's asbestos personal injury claims estimation expert and a recognized expert in the field of mass tort estimation. Educated as a lawyer and social psychologist, he is a co-founder of the Rand Corporation's Institute of Civil Justice and has devoted his career to empirical research in the areas of civil litigation and mass tort, with substantial emphasis on asbestos matters.[60] In the 1980s and 1990s, he consulted for federal judges in asbestos matters in Ohio, Texas, and New York, including with respect to the reformation of the Manville trust.[61] He has done estimation work for many official asbestos claimants committees, but also for insurance companies, defendants, and trusts, and has testified about estimation issues roughly 25 times.[62] Courts have adopted Dr. Peterson's estimates.[63] The Court admitted Dr. Peterson as an expert on asbestos litigation, subject to ruling on Garlock's *Daubert* motion.[64]

22. Dr. Peterson testified regarding his aggregate estimate of pending and future mesothelioma claims against Garlock and criticized Dr. Bates' methodology and conclusions. To generate his own estimate, Dr. Peterson used a standard method similar to that used by Dr. Rabinovitz and indeed, in other contexts, by Dr. Bates.[65] To estimate the pending mesothelioma claims, he counted the number of such claims in the Garrison Database, determined what

[60] Hr'g Tr. 3847:21-3849:11, Aug. 8, 2013 (Peterson).

[61] *Id*. at 3849:11-3850:2.

[62] *Id.* at 3850:3-11, 3850:24-3851:5.

[63] *E.g., In re Federal-Mogul Global, Inc.*, 330 B.R. 133, 164 (D. Del. 2005).

[64] *Id.* at 3851:9-15. *See* Response and Opposition of the Official Committee of Asbestos Personal Injury Claimants to Debtors' Motion to Exclude or Strike Committee and FCR Estimation Witness Opinions, filed on Sept. 27, 2013 [Dkt. No. 3153-original filed under seal].

[65] Hr'g Tr. 3881:25-3882:5, Aug. 8, 2013 (Peterson).

percentage of claims Garlock paid historically (referred to as the payment rate) and determined the average settlement that Garlock paid.[66] He derived the payment rate and average settlement amount from Garlock's actual claims experience during a "calibration period" running from 2006 through May 2010 (Garlock filed bankruptcy on June 5, 2010). He then multiplied the foregoing factors together to arrive at the value of pending claims.[67]

23. To estimate future claims, Dr. Peterson first forecasted the number of mesothelioma claims that would be brought against Garlock if it were not protected by bankruptcy. To do so, Dr. Peterson relied on Dr. Nicholson's widely-accepted and empirically corroborated epidemiological forecast of the incidence of mesothelioma in the United States, as extended through the year 2049.[68] He then forecasted what percentage of these future mesothelioma victims would bring claims against Garlock, a percentage known as the "propensity to sue," thereby calculating the total number of expected claims.[69] To that total, he applied the assumed payment rate and the average payment amount derived from Garlock's historical experience in the calibration period.[70] Because the data for the calibration period reveal a steady increase year-by-year in mesothelioma victims' propensity to sue Garlock, Dr. Peterson determined that, if Garlock remained in the tort system, this pattern would likely continue for about four years, after which the propensity to sue would stabilize.[71] Using these historically-derived assumptions for the propensity to sue, the payment rate, and the average

[66] *Id.* at 3882:7-12; 3882:24-3883:7.

[67] *Id.* at 3882:19-21.

[68] *Id.* at 3890:19-3891:5, 3891:19-3893:23.

[69] *Id*. at 3897:11-3898:4.

[70] *Id*. at 3902:3-9.

[71] *Id*. at 3898:5-3899:23.

payment amount, Dr. Peterson projected year-by-year, in nominal dollars, the amount that Garlock would pay to extinguish asbestos claims through 2049.[72] He adjusted those nominal dollars for future inflation, using an inflation rate of 2.5 percent, and then discounted the resulting stream of annual payments to net present value using a discount rate of 3.251 percent provided by the Committee's financial consultant, Mr. McGraw.[73]

24. Dr. Peterson's resulting aggregate estimate of present and future mesothelioma claims against Garlock is $1.265 billion.[74] That estimate does not include the additional defense costs Garlock would incur if it were defending and resolving the claims in the tort system.

25. Kenneth W. McGraw is an investment banker and Senior Consultant in the Finance Practice at Charles River Associates. He has previously advised and testified as an expert in many complex financial disputes and transactions. He provided his opinion as to the appropriate discount rate to use in the present-value calculation of the forecasted stream of future indemnity payments to mesothelioma claimants, after adjusting for inflation.[75] Mr. McGraw used a risk-free rate, as consistent with financial principles and legal precedent and as necessary to ensure that the projected payments are adjusted in the discounting calculation only for the time value of money and not for any risk of nonpayment or inadequacy of funding.[76] Noting that the financial markets accept U.S. Treasury securities as risk-free, he computed the discount rate separately for each yearly installment in the forecasted payment stream by reference to the yields

[72] *Id.* at 3890:11-13.

[73] *Id.* at 3902:9-13.

[74] *Id.* at 3903:11-17.

[75] Expert Report of Kenneth W. McGraw at 2, dated February 15, 2013 (**"McGraw Report"**) (ACC-937). *See* ¶ 2, *supra*.

[76] McGraw Report at 4-5.

demanded in the marketplace, as of June 4, 2010 (the day before the petition date), on Treasury securities of maturities corresponding to the timing of the assumed payments.[77] Mr. McGraw agreed that Dr. Peterson's forecasted inflation rate of 2.5 percent is a reasonable approximation of future rates of inflation,[78] and calculated that the varying discount rates applied on a year-by-year basis are the mathematical equivalent of a discount rate of 3.251 percent across the entire payment stream.[79] By discounting the inflation-adjusted stream of payments as described, Mr. McGraw calculated the net present value of the mesothelioma claims under Dr. Peterson's forecast as $1.265 billion.[80]

26. Mr. McGraw disagreed with Dr. Bates' assumption that the risk-free rate for the estimation should be measured by the long-term average return on Treasury securities projected by the Congressional Budget Office in its most recent Long-Term Budget Outlook. By making that assumption, and combining it with a 2.5 percent annual inflation factor, Dr. Bates arrived at a built-up yield of 5.58 percent as an invariable discount rate over the entire 50-year span covered by his estimate.[81] Mr. McGraw criticized that rate as substantially overstating the appropriate discount, and thereby substantially understating the estimate of claims, as a result of unrealistically ignoring market data and the term structure of interest rates.[82]

---

[77] *Id.* at 6-7.

[78] *Id*.

[79] *Id.* at 8.

[80] *Id.* ¶ 16 and Exh. 8 thereto.

[81] Rebuttal to the Report of Charles E. Bates, PhD by Kenneth W. McGraw at 2, dated April 22, 2013 ("**McGraw Rebuttal Report**") (ACC-943). *See* ¶ 2, *supra*.

[82] *See id.* ¶¶ 1, 3, 9-10.

Called by Coltec

27. Dr. James Heckman, a Professor of Economics and Nobel Laureate in Economics, testified on behalf of Coltec and was accepted as an expert regarding economics, econometrics, economic forecasting, and forecasting based on future behaviors and changing incentives.[83] Dr. Heckman is an academic who studies, among other fields, econometrics, empirical economics, and law and economics.[84] Dr. Heckman criticized the reliability of Dr. Peterson's and Dr. Rabinovitz's estimation approaches, principally due to their use of a "trend line extraction" methodology and not reporting statistical confidence intervals.[85] Dr. Heckman testified that he "would have some doubts" about Dr. Peterson's and Dr. Rabinovitz's estimates.[86] Dr. Heckman conceded, however, that he has never performed an estimate of a real-world company's asbestos liabilities; had not conducted any independent analysis of Garlock's asbestos liability; and could not say whether Dr. Peterson's and Dr. Rabinovitz's estimates are wrong.[87] In fact, Dr. Heckman testified that their estimates could well be too low.[88] Dr. Heckman was not asked by Garlock to prepare an expert report on the estimation approach used by Dr. Bates and offered no opinion as to how it compares to the approaches used by Dr. Peterson and Dr. Rabinovitz.[89]

[83] Hr'g Tr. 4233:16-22, Aug. 22, 2013 (Heckman).

[84] *Id*. at 4225:9-14, 4226:6-4227:17, 4229:9-19, 4232:3-12, 4264:6-7.

[85] *Id*. at 4225:15-4226:2.

[86] *Id*. at 4260:19-4261:7.

[87] *Id*. at 4256:10-19, 4266:5-15, 4267:5-11, 4269:16-25, 4270:3-10.

[88] *Id*. at 4269:16-25, 4270:11-14.

[89] *Id*. at 4267:15-24.

(ii) Fact Witnesses and Experts on Asbestos Litigation and Related Bankruptcy Topics

Called by Garlock

28. At several points in the Hearing, Garlock called as a fact witness Richard L. Magee, a Senior Vice President at EnPro since 2002 and until recently its General Counsel. He functioned throughout as the senior in-house attorney for Garlock and worked closely with the president and staff attorneys of Garrison in managing Garlock's defense and resolution of asbestos litigation.[90] Since Garlock filed bankruptcy, Mr. Magee has spent upwards of 90 percent of his time overseeing its conduct of the case.[91] At the Hearing, he testified about Garlock's involvement in asbestos litigation and its settlement and verdict history, including the differing approaches Garlock took over time with respect to resolving cases. Offering his views on some of Garlock's 15 "Designated Cases," he asserted that the plaintiffs and their counsel did not acknowledge the injured persons' exposures to the asbestos products of bankrupt insulation manufacturers, omissions that he asserted were characteristic of claims resolved by Garlock for high values.[92] He also testified about Garlock's asbestos estimates that were included in EnPro's prepetition financial reports, not only the estimates created by Bates White after 2004, but also the independent ones that management created as targets to incentivize Garrison personnel and control overall outlays related to asbestos litigation.[93] In such an estimate, Mr. Magee himself

[90] Hr'g Tr. 1385:5-1386:14, July 26, 2013 (Magee).

[91] *Id*. at 1388:8-13.

[92] Hr'g Tr. 2593:12-2594:22, Aug. 1, 2013 (Magee); Hr'g Tr. 3089:13-25, Aug. 5, 2013 (Magee).

[93] Hr'g Tr. 3144:18-3145:22, Aug. 5, 2013 (Magee); Hr'g Tr. 3205:10-23, Aug. 6, 2013 (Magee). Mr. Magee confirmed that, in the mid-1990s, in connection with the recapitalization of Garlock and the creation of Garrison, consultants to Garlock and Coltec estimated that Garlock's pending and future asbestos claims before the recapitalization exceeded its net assets and *(Footnote continued on next page.)*

projected a scenario in which Garlock's liability for asbestos claims through the year 2050 (chiefly for mesothelioma) would exceed $1 billion, a result that EnPro's financial reports deemed "plausible" but not "reasonable and probable." Mr. Magee acknowledged that Dr. Bates' prepetition estimates, provided to EnPro, assumed that payments to claimants by asbestos trusts for reorganized debtors would exert downward pressure on Garlock's settlement values, and the frustration he felt when this effect did not come about.[94]

29. Mr. Magee asserted that Garlock settled claims chiefly to avoid higher costs of defense.[95] Yet Mr. Magee admitted that plaintiffs in certain of Garlock's Designated Cases admitted to insulation exposures in various ways,[96] and that plaintiffs' counsel sometimes succeeded in creating trial risk and "a perception of liability" for Garlock in mesothelioma cases,

---

(Footnote continued from previous page.)
insurance by $375 million. Hr'g Tr. 3182:8-20, Aug. 6, 2013 (Magee). Coltec put forward the above-referenced estimate and conclusion in litigating its claim to certain tax benefits connected with the creation of Garrison. *See Coltec Indus., Inc. v. United States*, 454 F.3d 1340 (Fed. Cir. 2006) (reproduced as ACC-175).

[94] Hr'g Tr. 3375:23-3376:16, Aug. 6, 2013 (Magee); Hr'g Tr. 2581:18-2582:21, 2586:4-18, Aug. 1, 2013 (Magee).

[95] Hr'g Tr. 1391:2-1392:2, 1394:2-5, July 26, 2013 (Magee).

[96] *See, e.g.*, Hr'g Tr. 3268:22-3269:9, Aug. 6, 2013 (Magee). The "**Designated Cases**" are 15 mesothelioma claims about which Garlock obtained extensive discovery from plaintiff law firms in the estimation proceeding. They are a subset of 26 cases that Garlock included on its "**RFA 1.A List**," by way of reserving the right to introduce at the Hearing specific evidence of alleged failures by plaintiffs or their lawyers to make full disclosure of known product-exposure evidence in tort suits. That reservation of rights did not apply to the additional 184 cases named on Garlock's "**RFA List 1**," as to which Garlock's allegations of discovery failures by tort plaintiffs do not rest on case-specific evidence, but rather on inferences it draws from other sources, such as bankruptcy ballots and trust-claim data Garlock gathered in the course of the estimation proceeding. *See* Stipulation and Order Resolving Motion of the Official Committee of Asbestos Personal Injury Claimants to Compel Debtors to Respond to Certain Discovery Requests, dated Oct. 26, 2012 [Dkt. No. 2579]; Amendment to Stipulation and Order Resolving Motion of the Official Committee of Asbestos Personal Injury Claimants to Determine Insufficiency of the Debtors' Answers to the Committee's First Requests for Admission and to Compel Debtors to Respond to Certain Discovery Requests, dated Oct. 30, 2012 [Dkt. No. 2585].

and that Garlock considered various merits-based factors when settling cases.[97] Indeed, he acknowledged the internal settlement deliberations memorialized in Major Expense Project Approval forms or "**MEAs,**" which show that he and other senior management at Garrison and EnPro were acutely aware of the risks of trying mesothelioma claims, in light of such factors as the severity of the injured persons' damages and economic losses, the propensities of jury pools, the skills of plaintiffs' trial counsel, the variety of rules and practices in force in particular jurisdictions, and even the difficulties of trying cases alongside co-defendants with differing views.[98] Indeed, in case evaluations approved in writing by Mr. Magee and by the Chief Executive Officer of EnPro, Garrison personnel repeatedly evaluated groups of mesothelioma claims put forward by the Kazan, McClain firm in Oakland, California, as likely to produce verdicts totaling $1 billion or more if pressed to trial.[99]

30. Professor Lester Brickman is a professor at Cardozo Law School in New York, teaching contracts, a seminar on selected problems in professional responsibility and the legal profession, and land use planning. Although he has never tried a case, nor does he practice law, he has published scholarship for 22-23 years on asbestos litigation, and has testified before congressional subcommittees on matters such as the FAIR and FACT Acts and silicosis, and at two asbestos estimation trials.[100] He was offered by Garlock to provide testimony as an expert in asbestos litigation, including asbestos bankruptcy cases and asbestos trusts. Professor Brickman provided testimony supporting Garlock's interpretation of its settlement history. He gave his

[97] Hr'g Tr. 1394:10-14, July 26, 2013 (Magee)**.**

[98] ACC-766, 767, 770, 341, 332; Hr'g Tr. 3228:23-3229:3, 3232:6-11, 3234:20-3235:12, 3237:5-3240:9, 3246:24-3251:10, 3329:19-3332:7, 3333:8-3341:24, Aug. 6, 2013 (Magee).

[99] *Id.* at 3232:6-11; ACC-766; ACC-767.

[100] Hr'g Tr. 1135:5-1140:16, July 26, 2013 (Brickman).

views of the behavior of plaintiffs and plaintiffs' counsel in asbestos litigation, including contentions that 15 designated claimants concealed or omitted to disclose asbestos exposures, particularly asbestos insulation exposures. He testified that the claimant materials Garlock's counsel provided to him were not complete files, and that he did not review those selected materials in their entirety.[101] He admitted that his knowledge of those cases was limited to information supplied by Garlock's lawyers.[102] Professor Brickman accepted that the name of the manufacturer of insulation would not have been important to a plaintiff when he tore it out 35 years earlier, and he acknowledged that a plaintiff is probably telling the truth if he says he can't remember.[103] He did not say that asbestos plaintiffs wrongfully denied exposure to insulation products.[104] Indeed Professor Brickman admitted, upon questioning about specific designated claimants, that they had previously testified about their exposures to insulation products.[105]

31. John Turlik is an attorney at the law firm Segal, McCambridge, Singer and Mahoney. Mr. Turlik defended Garlock in asbestos litigation from 1989 until its bankruptcy, and from 2003 until 2010 was the company's "regional counsel" for the eastern United States.[106] Mr. Turlik testified as an expert regarding the assessment and evaluation of asbestos claims, assessing trial risk, the impact of evidence on trial risk, and costs incurred in defending asbestos claims.[107] He testified about the impact of the bankruptcy "wave" on Garlock and his views on

[101] *See, e.g., id.* at 1231:19-1232:25, 1246:25-1247:8.

[102] *Id.* at 1145:19-22.

[103] *Id.* at 1234:8-14.

[104] *Id.* at 1238:19-1239:1.

[105] *Id*. at 1229:25-1231:14.

[106] *See* Hr'g Tr. 2219:17-2223:15, July 31, 2013 (Turlik).

[107] *Id.* at 2226:22-2227:4.

how access to trust claims and ballots would provide evidence of alternative product exposures and thereby reduced Garlock's trial risk and settlement values.[108] Mr. Turlik also opined on the changes in tort litigation since Garlock's filing for bankruptcy and his views on how those changes would impact Garlock's trial risk and settlement values.[109]

32. Mr. Turlik testified that he settled the vast majority of cases and that often the settlements were completed before cases were worked up, and sometimes before a complaint was filed.[110] He stated that he considered a number of merits-based factors when making recommendations concerning settlements.[111] He acknowledged that verdicts rendered against other defendants in cases that Garlock settled before trial sometimes included allocations of fault to Garlock in percentages that underscored the benefit Garlock reaped by settling.[112] He also admitted Garlock never purported to pay any unaffiliated entities' share of liability, and there was nothing in the settlement agreements that required plaintiffs to cease developing evidence against other entities.[113] Mr. Turlik recognized that the law in many jurisdictions leaves plaintiffs free to assert trust claims after trial of their tort suits against non-bankrupt defendants and acknowledged that a defendant bears the burden of proof if it seeks to shift responsibility to other entities.[114] Mr. Turlik also stressed that, to apportion liability to another entity, a defendant

[108] *Id.* at 2251:2-2263:2; Hr'g Tr. 2321:3-2322:12, Aug. 1, 2013 (Turlik).

[109] Hr'g Tr. 2270:12-2278:5, Jul. 31, 2013 (Turlik); Hr'g Tr. 2321:15-2322:21, Aug. 1, 2013 (Turlik).

[110] Hr'g Tr. 2356:20-2357:10, Aug. 1, 2013 (Turlik).

[111] *Id.* at 2529:13-2533:2.

[112] *Id.* at 2373:14-2376:24. *See* ACC-747.

[113] *Id.* at 2368:12-2369:20.

[114] *Id.* at 2334:11-20, 2378:10-2380:23, 2390:7-17.

must show that the other entity's product emitted asbestos fibers in the plaintiff's "breathing zone."[115]

33. David Glaspy is an attorney at the law firm Glaspy & Glaspy in Pleasanton, California. Garlock called him as a rebuttal witness. From 1984 to 2010, Mr. Glaspy was the national and then regional counsel for Garlock.[116] Mr. Glaspy testified as an expert regarding the assessment and evaluation of asbestos claims including trial risk, the impact of evidence on trial risk, costs and settlement values, and evaluating the extent to which laws and procedures would impact the defense of asbestos claims.[117] According to him, Garlock generally hired experts and began preparing for trial as late as possible.[118] Mr. Glaspy opined about the impact of exposure evidence in asbestos cases and his views on how that information affects trial risk, settlement values and costs.[119] He confirmed that California law does not require the filing of trust claims before litigating tort suits to conclusion, and that a defendant in that state must meet the same causation standard for proving a plaintiff's exposure to a third party that the plaintiff must meet against the defendant.[120] Mr. Glaspy testified about recent changes in California law and his views on how those changes would decrease trial risk for asbestos defendants.[121] Based on information published by a defense firm in Northern California, Mr. Glaspy also asserted that the numbers of mesothelioma claims filed in San Francisco and Oakland have fallen in recent

[115] *See id.* at 2380:11-23, 2390:7-17.

[116] *See* Hr'g Tr. 4521:10-4523:1, Aug. 12, 2013 (Glaspy).

[117] *Id.* at 4526:19-24.

[118] Hr'g Tr. 4639:22-4640:5, Aug. 22, 2013 (Glaspy).

[119] Hr'g Tr. 4528:4-16, Aug. 12, 2013 (Glaspy).

[120] Hr'g Tr. 4590:1-10, 4656:2-9, Aug. 22, 2012 (Glaspy).

[121] *See id.* at 4584:15-4587:14.

years, but he maintains an active asbestos defense practice for many clients and acknowledged that an influx of Texas and New York plaintiff law firms into Los Angeles has resulted in an increase in mesothelioma filings in Los Angeles.[122] Mr. Glaspy disagreed with aspects of testimony given by David McClain about the Kazan McClain firm's trial and settlement history with Garlock (discussed below),[123] but Mr. Glaspy was confronted with certain documents that controverted his own recollections on that subject.[124] Mr. Glaspy also confirmed that he engaged in a merits-based evaluation, including trial risk, when settling cases.[125]

Called by the Committee

34. Paul J. Hanly, Jr. is an attorney and the co-founder of Hanly, Conroy, Bierstein, Sheridan, Fisher, Hayes LLP. For twenty years beginning in 1981, Mr. Hanly was national asbestos trial coordinating and settlement counsel for Turner & Newall and its subsidiaries, including Flexitallic, a gasket manufacturer, and ultimately for Federal Mogul when it acquired the Turner & Newall group.[126] Mr. Hanly was qualified as an expert on mass tort defense with a specific focus on asbestos tort defense strategies in the 1980s, 1990s, and early 2000s.[127] He testified about resolving and settling asbestos cases in the tort system, including approximately 300,000 asbestos personal injury cases.[128] He opined that many defendants began as peripheral participants in asbestos litigation, effectively "free-riding" on the defense efforts and settlement

[122] *Id.* at 4587:15-4588:21, 4649:16-4651:2.

[123] Hr'g Tr. 4548:17-4559:13, Aug. 12, 2013 (Glaspy).

[124] Hr'g Tr. 4593:1-4594:22, 4596:17-4613:11, Aug. 22, 2013 (Glaspy).

[125] *Id.* at 4662:23-4664:3.

[126] Hr'g Tr. 3405:9-3406:16, 3409:10-3410:7, Aug. 6, 2013 (Hanly).

[127] *Id.* at 3410:22-25, 3419:13-15.

[128] *Id.* at 3408:20-3409:7.

payments of lead defendants, such as Johns-Manville, the principal defendant in the entire litigation until its 1982 bankruptcy.[129] Mr. Hanly testified that when the lead defendants went into bankruptcy, the former peripheral defendants were brought to center stage in the tort suits and could not return to the periphery.[130] Mr. Hanly opined that in the 1990s, plaintiffs were not focused on gasket products, but that as insulation companies went bankrupt the plaintiffs' bar began to focus on the gasket companies and attacking their defenses.[131] He also testified that juries were focused on doing justice in a manner that would touch the parties in the courtroom, so that "empty chair" defenses were not successful as a long-term strategy.[132] Mr. Hanly also explained that trying significant numbers of cases was not a viable strategy, and that defendants could not afford to take the risk of trial except very infrequently.[133]

35. David McClain is the senior partner at the firm of Kazan, McClain, Satterley, Lyons, Greenwood & Oberman ("**Kazan, McClain**") in Oakland, California. Mr. McClain has been continuously engaged in asbestos personal injury tort litigation since 1981, and his firm concentrated its practice on mesothelioma cases for 25 years or more.[134] He testified about trying and settling mesothelioma cases in the tort system, including his experience in the early 1990s when Owens Corning went to "war" with his firm in an unsuccessful effort to force down the settlements paid to its clients.[135]

---

[129] *Id.* at 3426:13-3427:4, 3431:25-3432:4.

[130] *Id.* at 3431:19-21, 3432:15-22, 3434:2-9.

[131] Hr'g Tr. at 3793:21-3796:3, Aug. 8, 2013 (Hanly).

[132] Hr'g Tr. at 3435:19-3437:24, Aug. 6, 2013 (Hanly).

[133] Hr'g Tr. at 3796:4-3797:21, Aug. 8, 2013 (Hanly).

[134] Hr'g Tr. 3450:21-3452:7, Aug. 7, 2013 (McClain).

[135] *Id.* at 3454:13-3457:10.

36. Mr. McClain noted the several causes of action available to mesothelioma victims under California law (including strict products liability based on "consumer expectations," strict liability for failure to warn, negligence, and fraud),[136] as well as the defenses raised by virtually all defendants in today's tort system, including "encapsulation," "low dose," and "chrysotile" defenses.[137] He also explained California's liability apportionment rules, under which a defendant bears the burdens of (1) making a prima facie case against any entity it proposes to add to the verdict sheet,[138] (2) proving each element of a recognized cause of action to establish such an entity's responsibility to the plaintiff,[139] and (3) providing the jury with a rational basis to apportion the overall responsibility for the plaintiffs' injuries, failing which the defendant itself will bear the full brunt of an adverse verdict.[140]

37. Based on his own experience, Mr. McClain described a pattern in tort litigation in which it is common for a defendant to win every trial in the early stages, for plaintiffs' lawyers gradually to learn how to overcome the defenses and win the cases, and for settlement then to become the predominant mode of resolving claims against that defendant.[141] Mr. McClain acknowledged that his firm has never obtained a verdict against Garlock, but affirmed that Garlock settled Kazan, McClain's strong cases to prevent them from being tried.[142] He testified that the firm's cases in which Garlock was a defendant at trial in the 1980s were ones in which

[136] *Id.* at 3458:22-3461:18.

[137] *Id.* at 3464:7-3465:2.

[138] *Id.* at 3468:18-3469:4.

[139] *Id.* at 3468:1-13, 3468:18-3469:4.

[140] *Id.* at 3469:5-3470:6.

[141] *Id.* at 3494:5-7, 3453:10-3454:12, 3456:15-3457:10, 3486:15-20.

[142] *Id.* at 3508:9-15, 3509:1-6.

the principal defendant was Owens Corning (in the midst of its "war") and the plaintiff did not have extensive gasket exposures, but in which Garlock's participation as a defendant was tactically beneficial for the plaintiff (because, for example, of Garlock's own attack on Owens Corning). [143]

38. Mr. McClain testified that the composition of his firm's cases changed somewhat from the 1990s to the 2000s, with insulator and shipyard workers becoming less numerous among the plaintiffs and Navy veterans and workers in various land-based occupations becoming more so.[144] He stated that these changes affected the nature of the product exposure evidence that the injured persons themselves could provide, because, in comparison to workers in other occupations, insulators tended to have superior knowledge of the brands of insulation products they worked with and shipyard workers characteristically suffered extremely heavy asbestos exposures working in the confines of dry-docked ships undergoing refurbishment. By contrast, Navy veterans and land-based workers usually had contact with insulation only as bystanders, with indirect contacts much less apt to press upon them the names of insulation products, but frequently worked with gaskets and with pumps and valves using gasket components. [145] Mr. McClain testified that his clients respond honestly and fully to discovery but often do not know or remember the asbestos products to which they were exposed.[146]

39. Mr. McClain stated that Garlock's rising prominence in asbestos litigation in his cases over the course of the 2000s resulted not only from the exiting of defendants who declared bankruptcy, but also from the changing exposure histories of the plaintiffs and developments in

[143] *Id.* at 3492:5-3493:22.

[144] *Id.* at 3471:19-3474:25.

[145] *Id.* at 3473:1-3476:8.

[146] *Id.* at 3488:3-13, 3501:5-11.

California law. He testified that Navy personnel, such as pipefitters, machinists and boilermakers, could easily identify Garlock gaskets, because Garlock's name was stamped on every gasket, and they had personally handled and cut the gaskets and breathed in dust from scraping the gaskets.[147] While the Navy personnel had been exposed to insulation products being used near them, they generally could not identify those insulation products.[148] Moreover, he testified, Garlock continued to make gaskets until 2000-2001, while insulation defendants stopped making asbestos insulation in 1972.[149]

40. Mr. McClain testified as well that California's causation standard (which is satisfied by evidence that a given product increased, to a nontrivial extent, the risk of the plaintiff's incurring mesothelioma) is favorable to claimants in gasket cases,[150] while decisions narrowing the circumstances under which an equipment manufacturer may be held responsible for using of Garlock's asbestos gaskets as components has also increased Garlock's risks by depriving plaintiffs of significant alternative sources of recovery and making it harder for Garlock to lay off liability on the equipment makers.[151]

41. Mr. McClain described his firm's extensive settlement history with Garlock, including his negotiations with Garlock's counsel David Glaspy in which they periodically settled claims in groups.[152] He testified that the trend over the course of the 2000s was "[a] dramatic increase" in settlement value in which Garlock ended up paying many multiples of

[147] *Id.* at 3477:9-3478:2.

[148] *Id.* at 3478:3-9.

[149] *Id.* at 3478:10-23.

[150] *Id.* at 3479:3-8.

[151] *Id.* at 3479:9-3482:1.

[152] *Id.* at 3494:12-3494:15, 3495:5-3498:7.

what it had paid in the 1980s.[153] In Mr. McClain's experience, the trust recoveries available to his clients generally are insignificant in comparison to the damages mesothelioma claimants can obtain from solvent defendants.[154] He also testified that the risk of losing even a strong case induces a dying mesothelioma victim to settle for much less than the amount he would recover if he pressed the case to a successful verdict.[155]

42. Joseph Rice is a founding partner of the Motley Rice law firm ("**Motley Rice**"), and Co-Chair of the Committee.[156] Since 1981 he has represented asbestos victims in all aspects of litigation; he has also served on many official committees of asbestos claimants in bankruptcy cases, frequently in the role of Chair or member of the committee's negotiating subcommittee.[157] Mr. Rice testified about trying and settling asbestos cases in the tort system, and the factors that influenced when claims were filed and how they were prepared for trial, noting that, beyond interviewing the client as to his own knowledge, his firm generally does not devote intensive effort to investigating product exposures in a case until a trial date is assigned.[158] For this reason, he testified, a claimant's response to Garlock's questionnaires will reflect only the state of his lawyer's file as it existed when the response was given, as distinct from a fully prepared and trial-ready claim.[159]

---

[153] *Id.* at 3498:13-3499:2.

[154] *See, e.g., id.* at 3499:3-16.

[155] *Id.* at 3496:16-3497:19.

[156] Hr'g Tr. 3536:11-13, Aug. 7, 2013 (Rice).

[157] *Id.* at 3538:1-3, 3541:16-24, 3575:5-23, 3580:24-3582:11, 3586:24-3587:19.

[158] *Id.* at 3588:19-3591:17.

[159] *Id.* at 3595:10-18, 3596:10-19.

43. Taking exception to the idea that the bankruptcy filings of the early 2000s placed Garlock in a uniquely unfavorable position, Mr. Rice recounted the background to those filings in a series of watershed events in the long-running history of asbestos litigation. These included the bankruptcy of Johns-Manville in 1982;[160] the impact on formerly less prominent defendants as plaintiffs' lawyers undertook discovery and built cases against them;[161] the formation in 1985 of the Asbestos Claims Facility ("**ACF**") as a consortium of manufacturers and their insurers to act in concert in defending and resolving cases;[162] the breaking up of the ACF in the late 1980s, followed by the regrouping of some of its smaller manufacturer-members for similar purposes in the Center for Claims Resolution ("**CCR**");[163] the bankruptcies in the late 1980s and the 1990s of defendants that had grown prominent in the litigation, including Celotex, Raybestos-Manhattan, and Eagle Picher;[164] innovative judicial efforts undertaken in the 1990s to deal with the numerosity of asbestos claims through mass consolidations and test-case trials, as in the *Cimino* case in Texas and the *Abate* case in Baltimore;[165] in the mid-1990s, the attempted resolution of all present and future claims against the CCR through a novel "settlement class action" known as *Georgine* and another settlement class action involving plaintiff and defendant classes with respect to Fibreboard and its insurers, both of which were ultimately disapproved by the United States Supreme Court,[166] but not before many millions of dollars were spent on notice

[160] *Id.* at 3539:9-3540:4.

[161] *Id.* at 3540:5-3541:15.

[162] *Id.* at 3558:23-3560:8.

[163] *Id.* at 3560:9-3561:13.

[164] *Id.* at 3549:20-3550:9.

[165] *Id.* at 3542:22-3546:8.

[166] *Id.* at 3547:16-3549:19.

campaigns that had the effect of publicizing the litigation and generating even larger numbers of claims,[167] as the 1990s drew to a close and bankruptcy loomed as the only remaining path for mass tort defendants to achieve finality.

44. Mr. Rice thus explained that bankruptcies have been a constant feature throughout asbestos litigation, and that reorganizations have not reduced the value of claims against solvent defendants.[168] He also recounted how his firm goes about determining which of its clients is entitled to vote under the solicitation procedures used in asbestos bankruptcies, noting that plan documents in those cases typically do not limit the class of voting asbestos claimants to those who have evidence of exposure to the debtors' products, but rather encompass all claimants who may turn out to have a claim against an eventual trust based on any theory of the debtor's legal responsibility for their asbestos injuries.[169] Mr. Rice's firm therefore usually casts ballots for all clients whom it cannot rule out as possessing such a potential claim.[170] Mr. Rice noted that trusts emerging from asbestos bankruptcies usually succeed to, and make available to plaintiffs' counsel, the predecessor-defendants' documents pertaining to asbestos litigation.[171] It is also common, he testified, for a trust to publish lists of sites where the presence of its predecessor's asbestos products has been established,[172] and to accept without specific exposure evidence the claims of persons who worked there.[173] Mr. Rice stated that the publication of such a site list has

[167] *Id.* at 3554:20-3556:24.

[168] *Id.* at 3550:10-3552:13.

[169] *Id.* at 3599:24-3610:10.

[170] *Id*. at 3603:12-3605-12.

[171] *Id.* at 3593:1-3594:3.

[172] *Id.* at 3593:14-3594:3.

[173] *Id.* at 3604:19-3605:4.

usually increased by 25 percent the number of clients for whom his firm can file claims against the trust.[174]

45. Based on his extensive experience in negotiating successful plans of reorganization with asbestos debtors,[175] Mr. Rice affirmed that the most important factor in achieving a consensual resolution is for the constituency of asbestos creditors to be persuaded that a proposed plan of reorganization treats them fairly in light of applicable non-bankruptcy law, constitutional principles, the realities of the debtors' financial condition and its responsibility to competing creditor constituencies.[176] He characterized Garlock's proposed plan as one that attempts to revise the rules and procedures under which asbestos claims against Garlock would be handled, for Garlock's advantage and in ways that it has been unable to achieve through litigation or legislation, and he predicted accordingly that the plan will not garner the support of claimants.[177]

46. James Patton is a bankruptcy attorney and Chairman of Young, Conaway, Stargatt & Taylor LLP.[178] He has been involved in asbestos bankruptcies and the trusts that result from those reorganizations since 1996, generally serving as counsel to the future claimants' representatives.[179] He was certified by this Court to testify as an expert on the process of asbestos bankruptcy reorganization and the creation, organization, and operation of the trusts.[180]

---

[174] *Id.* at 3604:11-17.

[175] *Id.* at 3575:5-3582:11.

[176] *Id.* at 3582:12-3583:6.

[177] *Id.* at 3582:12-3583:6, 3610:11-3622:16.

[178] Hr'g Tr. 3672:12-21, Aug. 7, 2013 (Patton).

[179] *Id.* at 3674:1-3678:20.

[180] *Id.* at 3678:21-25, 3681:7-9.

He testified that neither voting on a plan nor filing a claim against a trust constitutes a representation that the claimant has certainty regarding his or her knowledge of exposure to a debtor's products or has gathered all of the evidence necessary to establish a claim against the debtor in the tort system.[181] He described the history and import of provisions that limit ballots' use to voting purposes and make clear that ballots do not constitute claims.[182] He explained that voting procedures in Section 524(g) reorganizations are meant to sweep in all potential claims that are to be addressed by a trust under the plan of reorganization, so that the relief afforded by a confirmed plan, including both a discharge and the injunctive channeling of asbestos claims to a trust, will afford effective and comprehensive relief to the debtor.[183] Likewise, a Section 524(g) trust is intended to address all asbestos-related claims against the debtor, including claims that may be asserted on grounds other than exposure to the debtor's own asbestos products.[184] On these and other grounds, Mr. Patton also debunked the notion that Rule 2019 statements submitted by plaintiffs' counsel to identify multiple clients in asbestos bankruptcies amount, in context, to assertions that those clients possess evidence that they were exposed to the debtor's asbestos products.[185]

47. Mr. Patton noted that claimants sometimes submit claims to trusts without supporting evidence and that such deficient claims are not paid.[186] He also testified that a claimant does not necessarily have to assert that he or she possesses proof of exposure when

[181] *Id.* at 3682:15-3683:10, 3691:21-3694:7; 3709:5-3710:20. Hr'g Tr. at 3788:19-3789:17, Aug. 8, 2013 (Patton).

[182] Hr'g Tr. 3690:12-3691:2, Aug. 7, 2013 (Patton).

[183] *Id.* at 3691:21-3694:7.

[184] Hr'g Tr. 3745:12-3746:9, Aug. 8, 2103 (Patton).

[185] *Id.* at 3765:22-3766:19; 3788:5-18.

[186] Hr'g Tr. 3714:8-3717:14, Aug. 7, 2013 (Patton).

filing a trust claim because claimants can file claims without exposure evidence and then defer them in hopes of later developing such evidence and completing the claim.[187] He testified as well that it is common for a trust to presume that persons who worked at certain sites in certain trades and time periods were exposed to asbestos products of the trust's predecessor, and that, where such a presumption applies, mesothelioma victims may submit trust claims unsupported by independent exposure evidence or any representation that the claimant possesses any such evidence.[188]

(iii) Experts on Scientific and Medical Topics

Called by Garlock

48. Dr. David H. Garabrant is board-certified in internal medicine, preventive medicine, and occupational medicine. He was recognized by the Court as an expert in the fields of occupational medicine and epidemiology.[189] Although he has authored 185 articles in the peer reviewed literature, only four of them mention asbestos.[190] He has never published any papers involving the health consequences from the use of industrial gaskets.[191] Dr. Garabrant conceded that he is not an expert on translocation of asbestos fibers from the lung to the pleura nor is he an expert in lung fiber burden analysis.[192] Moreover, Dr. Garabrant conceded that in formulating his opinions in this case, he did not incorporate the results of any in vitro or animal

[187] *Id.* at 3709:18-3710:18.

[188] *Id.* at 3709:18-3711:3.

[189] Hr'g Tr. 236:3-6, 241:20-24, July 22, 2013 (Garabrant).

[190] *Id*. at 314:13-316:5.

[191] *Id*. at Tr. 317:1-3.

[192] *Id.* at Tr. 364:8-15.

experiments.[193] In asbestos cases, Dr. Garabrant has testified at the request of car companies, brake suppliers, and truck and heavy equipment manufacturers and has opined that his evaluation of epidemiology demonstrates that there is no association between brake work and the development of mesothelioma.[194] Dr. Garabrant acknowledges, however, that approximately twenty studies of plumbers and pipefitters, occupations where workers use gaskets, demonstrated a five-fold risk of developing mesothelioma.[195]

49. Dr. David Weill is board-certified in pulmonary and critical care medicine.[196] He is currently a professor of medicine in the division of pulmonary critical care medicine at Stanford University.[197] The Court accepted Dr. Weill as an expert in asbestos disease and pulmonary medicine.[198] Dr. Weill conceded that he was not an expert in occupational medicine and has never written an article on mesothelioma.[199] Dr. Weill holds the opinion that chrysotile asbestos, the type of asbestos that comprised 95 percent of the asbestos used in the United States, is totally innocuous and incapable of causing pleural plaques, asbestosis, lung cancer, or mesothelioma.[200] In his opinion, the only workers exposed to chrysotile asbestos that he believes are at risk of contracting mesothelioma are chrysotile miners.[201] Dr. Weill conceded that his position is contrary to the conclusions reached by the Canadian Medical Association, the

[193] *Id.* at Tr. 327:20-328:25.

[194] *Id.* at Tr. 319:6-321:5.

[195] *Id.* at 293:22-294-9.

[196] Hr'g Tr. 960:20-24, July 25, 2013 (Weill).

[197] *Id*. at 961:5-12.

[198] *Id*. at 964:23-965:1.

[199] *Id*. at 1017:1-9.

[200] *Id*. at 1019:21-1020:6.

[201] *Id*. at 1022:2-6.

American Public Health Association, the American Cancer Society, the World Health Organization, the National Toxicology Program, the United States Public Health Service, and the World Trade Organization.[202]

50. Dr. Thomas Sporn is an attending pathologist at Duke University Medical Center who is board certified in anatomic pathology and forensic pathology.[203] Dr. Sporn, however, is not an epidemiologist, nor has he published any analytical epidemiology studies of asbestos and disease.[204] Dr. Sporn was recognized by this Court as an expert in pathology, asbestos disease and asbestos fiber type mineralogy.[205] Dr. Sporn testified about the mineralogical differences between asbestos fiber types, fiber burden analysis pertaining to human lung tissue samples, and whether exposure to chrysotile asbestos found in finished products, including packing and gaskets, can contribute to cause mesothelioma in humans.[206] Although Dr. Sporn opined that chrysotile asbestos found in packing and gaskets does not contribute to cause asbestos-related disease in humans,[207] on cross-examination Dr. Sporn admitted that he has previously testified to just the opposite—that is, that chrysotile asbestos fibers can and do cause mesothelioma in humans.[208] Indeed, Dr. Sporn acknowledged that scientific and research agencies throughout this country, including but not limited to, the National Cancer Institute, the World Health Organization, the International Agency for Research on Cancer, and the United States Surgeon

[202] *Id*. at 1022:8-1023:3, 1024:13-1025:15.

[203] Hr'g Tr. 405:1-9, 406:1-3, July 23, 2013 (Sporn).

[204] *Id*. at 443:13-21.

[205] *Id*. at 413:6-10.

[206] *Id*. at 413:11- 414:13.

[207] *Id.* at 445:4-19.

[208] *Id*. at 447:12-448:2, 449:11-18.

General have all agreed that chrysotile asbestos causes disease in human beings.[209] Dr. Sporn also testified about the limitations of fiber burden analysis in detecting chrysotile fibers in lung tissue samples from humans.[210]

51. Captain Charles David Wasson is a naval consultant with thirty years of naval experience.[211] Captain Wasson was recognized by this Court as an expert on the current and historical uses of asbestos-containing packing, gaskets, and insulation aboard naval ships.[212] He offered testimony regarding the various naval ratings that worked with and around packing and gaskets, identified the types of insulation material that was encountered and removed to gain access to packing and gaskets, and identified the types of replacement packing and gasket materials used by the U.S. Navy. Although he opined that working with packing and gasket materials is not a dust-generating process, on cross-examination, Captain Wasson admitted that he was not qualified to opine as to the visible asbestos fibers released from gasket or packing work nor was he qualified to discuss the health consequences associated with asbestos exposure from such work.[213] He also acknowledged that he could not offer any testimony as to the various trades who worked with and around asbestos-containing gaskets, packing or insulation in connection with any land-based industrial facilities in which Garlock sold its asbestos-containing sheet gaskets.[214]

---

[209] *Id*. at 449:11-450:8.

[210] *Id*. at 454:21-458:1.

[211] Hr'g Tr. 150:2-9, July 22, 2013 (Wasson).

[212] *Id*. at 166:24-169:1.

[213] *Id*. at 168:4-20, 228:24-229:19.

[214] *Id*. at 215:19-216:18, 219:4-10.

52. Larry R. Liukonen is a Certified Industrial Hygienist who currently works for Technical Safety and Health Consulting, Incorporated, a company that he owns with his wife.[215] The Court accepted Mr. Liukonen as an expert in industrial hygiene.[216] Mr. Liukonen's testimony centered primarily on a gasket study that he performed for the United States Navy at Puget Sound Naval Shipyard in 1978.[217] Based on that study, he testified that end users did not have exposure to asbestos from working with gaskets.[218] He further testified that the only housekeeping measures recommended for the fabrication and removal of gaskets by end users was to put the waste in a plastic bag.[219] On cross-examination, however, Mr. Liukonen admitted that the term "housekeeping" as defined in his study included the use of high efficiency vacuum cleaners or porto vacs to clean areas in addition to placing the waste material in sealed impermeable polyurethane bags.[220] He also conceded that his study did not test the level of dust generated when an individual would fabricate a gasket with a hammer and shears, as would often happen in the Navy.[221] He further agreed that he did not conduct a bulk analysis of any gasket material removed in the study and, therefore, did not know whether the material being removed contained asbestos or, if it did, how much asbestos it contained.[222] Finally, he acknowledged that his study did not disclose the location of where the operation took place, *i.e.*, in a shop or on

[215] Hr'g Tr. 562:20-563:7, July 24, 2013 (Liukonen).

[216] *Id*. at 509:3-6.

[217] *Id*. at 510:2-511:3.

[218] *Id*. at 519:4-9.

[219] *Id*. at 518:5-23.

[220] Hr'g Tr. 569:15-570:8, July 23, 2013 (Liukonen).

[221] *Id*. at 576:17-577:6.

[222] *Id*. at 581:24-582:16.

ship, nor did it indicate the types of pipes involved in the gasket removal process.[223] With regard to work practices, Mr. Liukonen wrote in his study that, "wire brushing by its mechanical action would produce higher dust concentrations than hand scraping."[224] This statement acknowledges that the wire brushing of flange surfaces during the removal of asbestos gaskets generates measurable concentrations of dust.

53. Fredrick William Boelter is an environmental engineer by training.[225] He is also a Certified Industrial Hygienist, a licensed AHERA inspector and a registered Professional Engineer.[226] The Court accepted Mr. Boelter as an expert in industrial hygiene.[227] Mr. Boelter testified about the results of a study he conducted on insulation exposure and compared them to the levels of exposure he reported in his published paper on gaskets.[228] According to his results, a pipefitter and his helper were exposed to an eight-hour time-weighted average of 86 fibers per cubic centimeter from insulation as compared to a non-quantifiable value that was less than 0.007 fibers per cubic centimeter from gasket material.[229] In discussing gasket removal, Mr. Boelter conceded that it was common to see someone using a wire brush to polish the flange surface once the gasket had been scraped to remove residue or to clean the flange surface.[230] When reviewing a videotape taken of his gasket removal test, Mr. Boelter conceded that some of the gaskets he tested were removed intact with little gasket residue remaining on the mating

[223] *Id*. at 591:21-592:7.

[224] *Id*. at 588:13-16.

[225] Hr'g Tr. 625:5-9, July 24, 2013 (Boelter).

[226] *Id*. at 626:9-24.

[227] *Id*. at 682:25-683:3.

[228] *Id*. at 673:19-674:17.

[229] *Id*. at 674:18-25.

[230] *Id*. at 693:1-5.

surface.[231] Although published criticism of Mr. Boelter's tests indicated that close to 50 percent of all of the fittings he studied had gaskets that were removed intact, Mr. Boelter did not remember the statistics.[232] In prior testimony, however, he had represented that most of the gaskets came off intact—where one could hold it up and it still looked like a gasket.[233] Mr. Boelter also conceded that he included in his study test results of the gaskets that did not contain any asbestos.[234] Again, however, he was unable to recall exactly how many of the flanges he studied contained gaskets free of asbestos.[235]

54. John L. Henshaw is a Certified Industrial Hygienist who currently serves at the vice president of the Academy of Industrial Hygiene and whose past employment includes vice president of the Industrial Hygiene Association and administrator for the Occupational Safety and Health Administration.[236] Mr. Henshaw was recognized by this Court as an expert in industrial hygiene and exposure assessment.[237] Mr. Henshaw testified about potential asbestos exposures from gaskets and packing compared to potential asbestos exposures from other sources, including asbestos-containing insulation.[238] In his opinion, individuals employed in occupations that performed work on asbestos-packing and gaskets were more likely to experience significant asbestos exposure from working with and around asbestos insulation, not

[231] *Id*. at 742:12-744:14.

[232] *Id*. at 746:17-747:2.

[233] *Id*. at 749:10-19.

[234] *Id*. at 748:7-16.

[235] *Id*. at 748:17-24.

[236] Hr'g Tr. 808:2-19, 810:6-10, July 24, 2013 (Henshaw).

[237] *Id*. at 819:7-11.

[238] *Id*. at 808:20-809:4.

from the gaskets and packing.[239] Mr. Henshaw agreed that the National Academy of Sciences has concluded that chrysotile asbestos causes mesothelioma and that exposure levels as low as .0004 f/cc can cause mesothelioma and he acknowledged that the peer review process of the National Academy of Sciences was "one of the highest levels of intellectual scrutiny something can survive."[240] Indeed, Mr. Henshaw acknowledged that when the encapsulated asbestos in Garlock gaskets is disturbed by shearing, cutting, punching, tearing, sanding, scraping, brushing, abrading or grinding, asbestos fibers will be emitted into the air, where they can be inhaled and cause injury.[241] Mr. Henshaw also testified that he reviewed hundreds of deposition transcripts of current plaintiffs against Garlock and that plaintiffs frequently acknowledge exposure to other sources of asbestos.[242]

55. Dr. Elizabeth Anderson has a Ph.D. in organic chemistry and has previously worked for the Environmental Protection Agency, where she developed various risk assessment guidelines.[243] Dr. Anderson was recognized by the Court as an expert in the fields of toxicology, risk analysis and the application of risk analysis to public health issues.[244] Dr. Anderson's testimony in this case focused on her criticism of the Committee's experts for relying on public health agency statements as part of the basis for the Committee's expert opinions that exposure to chrysotile asbestos can cause disease.[245] On cross-examination, Dr. Anderson acknowledged

[239] Hr'g Tr. 837:5-17, July 25, 2013 (Henshaw).

[240] *Id*. at 938:1-39:22.

[241] *Id*. at 894:1-895:8.

[242] Hr'g Tr. 898:10-15, 901:16-19, 910:22-912:4, July 25, 2013 (Henshaw).

[243] Hr'g Tr. 4375:8-4376:11, Aug. 12, 2013 (Anderson).

[244] *Id*. at 4374:2-5, 4379:5-11.

[245] *Id*. at 4374:11-4375:6, 4384:7-15.

that she is neither a medical doctor nor an epidemiologist. She conceded that she has never designed or published an epidemiological study pertaining to asbestos or asbestos-exposed workers in any peer-reviewed literature and she agreed that she is not qualified to take a clinical history of a patient for the purpose of assessing medical disease or causation.[246] She admitted that the International Agency for Research on Cancer, in reaching its conclusion that chrysotile asbestos causes mesothelioma in humans, relied on a comprehensive review of over 400 independent scientific and medical references, including epidemiology studies, animal studies and exposure studies.[247] Similarly, she agreed that the National Academy of Sciences, in concluding that chrysotile asbestos cause mesothelioma in humans at exposure levels as low as .0004 fibers per cubic centimeter, relied on human epidemiology studies.[248] Finally, she conceded that the World Health Organization's 1998 chrysotile monograph included twenty-nine pages of medical and scientific article citations which formed the basis of its conclusion that chrysotile asbestos poses increased health risks for all asbestos-related diseases and no exposure threshold has been identified for carcinogenic risks associated with chrysotile.[249]

56. Dr. Lambertus Hesselink has a Ph.D. in applied physics and applied mechanics.[250] He was admitted by the Court as an expert in mechanical engineering, applied physics, light scattering and Tyndall lighting.[251] Dr. Hesselink's testimony focused on his opinion that the particles visible during the Tyndall lighting in the MAS experiments fabricating and removing

[246] *Id*. at 4412:11-21, 4413:1-9.

[247] *Id*. at 4417:3-4419:15.

[248] *Id*. at 4428:10-23.

[249] *Id*. at 4420:6-4424:4.

[250] Hr'g Tr. 4436:1-15, Aug. 12, 2013 (Hesselink).

[251] *Id*. at 4439:16-20.

Garlock gaskets were not light scattering off of single respirable asbestos fibers with diameters ranging from 0.01 microns to 3 microns.[252] On cross-examination, Dr. Hesselink conceded that Tyndall lighting has been used for decades as a method of making fine airborne particles visible to detect potential hazardous exposures.[253] In fact, he acknowledged that the Environmental Protection Agency had Standard Operating Procedures for conducting evaluations of dust using Tyndall lighting.[254] He further agreed that the Health and Safety Laboratory in England, the equivalent of the Occupational Safety and Health Administration in the United States, also sanctioned the use of Tyndall lighting to detect invisible dust hazards.[255] In addition, he testified that his experiment and criticisms of the use and interpretation of the effects of Tyndall lighting have not been subjected to peer-review.[256]

Called by the Committee

57. Dr. Laura Stewart Welch is a board-certified internist and occupational medicine physician who has diagnosed and/or treated at least a thousand patients with asbestos-related disease, and has conducted an extensive longitudinal epidemiological study of sheet metal workers and asbestos-related lung disease.[257] Dr. Welch has published approximately 50 papers in the peer-reviewed medical and scientific literature, more than a dozen of which involved asbestos-related disease, and has also peer-reviewed articles submitted for publication in

[252] *Id*. at 4439:22-4440:7, 4457:21-24.

[253] *Id*. at 4474:14-4476:18, 4481:14-22.

[254] *Id*. at 4481:14-4482:6; ACC-3692.

[255] Hr'g Tr. 4476:6-4477:20, Aug. 12, 2013 (Hesselink); ACC-3691.

[256] Hr'g Tr. 4473:18-22, Aug. 12, 20313 (Hesselink).

[257] Hr'g Tr. 2078:15-21, 2083:14-2084:25, 2099:4-22, July 31, 2013 (Welch); ACC-3001.

industrial and occupational medicine journals around the world.[258] Dr. Welch has been recognized by state and federal courts, including asbestos-related bankruptcy proceedings, as an expert in asbestos-related epidemiology and causation and has testified before Congress twice on these topics.[259] One of Dr. Welch's epidemiology studies relating to mesothelioma causation was cited by the International Agency for Research on Cancer in its 2012 Monograph on asbestos.[260] This Court recognized Dr. Welch as an expert in internal medicine, occupational medicine, the epidemiology of asbestos-related disease, and the causation of mesothelioma.[261] Dr. Welch testified about the epidemiology of asbestos related diseases, the causation of asbestos related diseases, and what the medical and scientific literature reveals about asbestos exposures from working with asbestos-containing packing and gaskets and other chrysotile asbestos products. She testified that it is the general consensus in the scientific community that all commercially available fiber types of asbestos, including chrysotile asbestos, cause mesothelioma.[262] In discussing the foundations of her opinion, Dr. Welch discussed various epidemiology studies conducted all over the world showing an increased risk of mesothelioma in cohorts of people exposed to chrysotile asbestos.[263] In regard to fiber potency, Dr. Welch testified that while amphibole forms of asbestos are likely more potent in causing mesothelioma on a fiber per fiber basis, many of the studies used to calculate potency differences are outdated. Indeed, in 2008 a science advisory board convened by the Environmental Protection Agency to

[258] Hr'g Tr. 2082:2-2083:13, 2099:23-2100:8, July 31, 2013 (Welch); ACC-3001.

[259] Hr'g Tr. 2099:23-2101:3, July 31, 2013 (Welch).

[260] *Id*. at 2089:21-2091:3.

[261] *Id*. at 2102:8-14.

[262] *Id*. at 2104:7-2106:23.

[263] *Id*. at 2111:8-2121:11.

quantify the differences in fiber types determined that the historical data are not sufficient to conclude that chrysotile asbestos is less potent than amphibole asbestos.[264]

58. Dr. Carl A. Brodkin is a physician board-certified in internal medicine and occupational medicine.[265] In addition, while obtaining a Master's Degree in Public Health, he studied epidemiology, toxicology, and industrial hygiene.[266] Dr. Brodkin is a co-investigator in the CARET study involving over 4,000 workers exposed to asbestos, a thousand of which were pipefitters.[267] Dr. Brodkin is a co-editor of the Textbook of Clinical, Occupational and Environmental Medicine and has published more than 40 peer-reviewed articles on asbestos and asbestos disease.[268] He currently serves as an adjunct clinical associate professor at the University of Washington.[269] The Court accepted Dr. Brodkin as an expert in Occupational and Environmental Medicine. Dr. Brodkin began his testimony by discussing what is known about asbestos diseases, the dangers of asbestos gaskets and packing, and when that knowledge came about.[270] Dr. Brodkin explained how the medical evidence establishes a causal relationship between the use of gaskets and packing and the development of mesothelioma through the use of the Bradford Hill causation criteria, first with regard to chrysotile and then specifically with

[264] *Id*. at 2092:22-2096:10, 2104:7-2106:2, 2188:1-8.

[265] Hr'g Tr. 1917:16-24, July 30, 2013 (Brodkin); ACC-3333.

[266] Hr'g Tr. at 1954:10-24, July 30, 2013 (Brodkin).

[267] *Id*. at 1919:25-1920:11.

[268] *Id*. at 1921:18-24, 1923:5-10.

[269] *Id*. at 1923:11-20.

[270] *Id*. at 1927:15-1928:21, 1929:7-14, 1930:13-1931:16, 1934:8-19.

regard to the fabrication and removal of asbestos gaskets.[271] He concluded that chrysotile asbestos in gaskets and packing is a potent risk factor for mesothelioma.[272]

59. Dr. Arnold Brody is a research scientist and holds a Ph.D. in cellular biology.[273] Since the mid-1970s, Dr. Brody has conducted extensive work in the area of experimental pathology for asbestos-related diseases including animal studies and cellular induction studies to research the potential of the various asbestos fiber types to cause disease in animals and in humans.[274] In addition to writing over 153 peer-reviewed scientific articles (130 of which relate directly to asbestos) and 55 book chapters and proceedings that relate specifically to the molecular and cellular aspects of asbestos disease, Dr. Brody has served as faculty at several medical schools and universities and lectured on pulmonary anatomy and asbestos disease.[275] This Court recognized Dr. Brody as an expert in the fields of cell biology and experimental pathology.[276] Dr. Brody provided general causation testimony as it relates to the cancer causing properties of asbestos and how asbestos fiber inhalation may result in the development of cancer and other disease processes.[277] Dr. Brody confirmed that all asbestos fiber types, including chrysotile, have been shown to cause mesothelioma, as well as all other asbestos-related diseases

[271] *Id*. at 1951:5-1952:23, 1952:24-1954:9, 1957:17-1958:1, 1961:1-21, 1967:7-1968:25, 1970:1-23, 1970:24-1971:22, 1973:1-16, 1979:7-12, 1979:13-1980:15, 1980:16-1981:19, 1981:20-1984:6.

[272] *Id*. at 1989:14-1990:1.

[273] Hr'g Tr. 1818:4-17, July 30, 2013 (Brody); ACC-3562.

[274] Hr'g Tr. 1821:21–1822:1, July 30, 2013 (Brody).

[275] *Id*. at 1818:22–1819:3, 1820:11–1821:7.

[276] *Id*. at 1822:2-9.

[277] *Id*. at 1824:12-18; ACC-3566.

in humans.[278] Dr. Brody testified that inhaled asbestos fiber have the ability to damage the genetic composition of cells.[279] Wherever asbestos fibers travel in the human body, they are capable of causing injuries at the cellular level.[280] Based on his published studies, Dr. Brody opined that chrysotile asbestos is cytotoxic to human and animal macrophages and kills cells that function as a key component of the body's natural defense mechanism.[281]

60. Dr. William Edward Longo holds a Ph.D. in engineering and material sciences.[282] Dr. Longo was offered as an expert in material science, electron microscopy and industrial hygiene as it relates to asbestos.[283] His company, Materials Analytical Services (MAS), an accredited laboratory, has examined more than 400,000 individual asbestos samples and performed a variety of tests on the levels of asbestos dust generated during the routine work practices of installation and removal of gaskets containing up to 80 percent asbestos.[284] The results of the MAS experiments on asbestos fiber release from working with gaskets were published in the peer-reviewed journal Applied Occupational Environmental Hygiene.[285] The MAS experiments, which were based upon the work practices described by pipefitters and performed by an actual steamfitter, demonstrated that the fabrication and removal of Garlock asbestos gaskets released asbestos fibers into the work environment at levels magnitudes higher

[278] Hr'g Tr. 1858:13-22, 1860:1-18, July 30, 2013 (Brody).

[279] *Id*. at 1838:5-12, 1847:7-1857:25.

[280] *Id*. at 1853:24-1854:9.

[281] *Id*. at 1858:23-1860:4.

[282] Hr'g Tr. 1426:21-22, 1427:6-12, July 29, 2013 (Longo); ACC-3645.

[283] Hr'g Tr. 1449:3-7, July 29, 2013 (Longo).

[284] *Id*. at 1427:13-16, 1428:20-22, 1433:3-8, 1463:21-22, 1468:21-25.

[285] *Id*. at 1434:8-19.

than the background level of asbestos in the ambient air.[286] In addition to recording the levels of asbestos dust generated during the fabrication and removal of gaskets, MAS tested Garlock asbestos gaskets with a specialized testing protocol to determine their composition and found that, in addition to up to 80 percent chrysotile asbestos, the gaskets contained trace amounts of amphibole asbestos, between 100 and 150 million fibers per gram.[287]

61. James Harold Shoemaker is a certified Nuclear Designer with a Bachelor of Science Degree in Engineering Technology. In July of 2013, Mr. Shoemaker retired from his position as a nuclear ship consultant for the United States Navy.[288] Mr. Shoemaker has over fifty years of experience working at two of the largest shipyards in this country, the Newport News Shipyard and the Norfolk Naval Shipyard, as a welder helper, a sheet metal helper, a senior nuclear designer, a Chief Scheduler, a Superintendent of the Sheet Metal Department, a Pipefitter Superintendant, a Project Superintendent, and Production Manager.[289] Mr. Shoemaker was recognized by this Court as an expert in the work methods, tools and materials used for the fabrication, removal, replacement and cleanup of gaskets and insulation on naval ships, the sequencing of work during the construction and overhaul of naval Ships, and the safety procedures, controls and/or regulations pertaining to asbestos gaskets and insulation on naval ships from the 1960s through the 1990s.[290] Mr. Shoemaker testified about his experience observing and supervising thousands of shipyard workers who fabricated, installed and/or removed asbestos-containing sheet gaskets and packing, the sequencing of activities that would

[286] *Id*. at 1454:14-16; 1465:1-14, 1474:13-20, 1475:6-13, 1503:12-1505:19.

[287] *Id*. at 1484:5-10, 1485:1-7, 1489:1-11.

[288] Hr'g Tr. 1634:8-16, 1636:3-20, July 29, 2013 (Shoemaker); ACC-3781.

[289] Hr'g Tr. 1637:12-1641:14, July 29, 2013 (Shoemaker); ACC-3781, ACC-5063(a).

[290] Hr'g Tr. 1648:12-1649:1, 1651:8-1652:13, July 29, 2013 (Shoemaker).

take place during the overhaul of Naval vessels, as well as the safety controls and regulations pertaining to asbestos gaskets and insulation.[291] He confirmed that Dr. Longo's videotapes depicting the tools and methods pertaining to the fabrication and removal of asbestos sheet gaskets were substantially similar to the ways in which asbestos gaskets were fabricated and removed by real-world workers in the shipyard and aboard ships during overhauls.[292]

62. Philip John Templin is a Certified Industrial Hygienist with a Master of Science degree in public health.[293] Asbestos has been an area of interest for him from the very first weeks of graduate school and throughout his professional career.[294] The Court accepted Mr. Templin as an expert in industrial hygiene.[295] Initially, Mr. Templin discussed the history of industrial hygiene as it related to protecting workers from exposures to asbestos.[296] Mr. Templin next compared the level of asbestos in the background ambient air with the levels of asbestos generated during the fabrication and removal of gaskets.[297] Finally, Mr. Templin testified about the mandatory industrial hygiene procedures currently in force for any work with an asbestos gasket that is deteriorated and unlikely to be removed intact.[298] In addition, the worker performing these tasks must be attired in full-body protective coveralls with respiratory protection.[299]

---

[291] *Id*. at 1641:19-1648:11, 1669:13-1670:25, 1685:3-1688:5.

[292] *Id*. at 1671:10-14, 1679:3-11.

[293] Hr'g Tr. 1727:25-1728:25, July 30, 2013 (Templin); ACC-3251.

[294] Hr'g Tr. 1730:9-14, July 30, 2013 (Templin).

[295] *Id*. at 1733:8-17.

[296] *Id*. at 1732:16-24, 1733:19-1734:21.

[297] *Id*. at 1748:1-1750:15, 1752:2-1753:13.

[298] *Id*. at 1761:21-1763:2.

[299] *Id*. at 1759:24-1761:20.

B. Garlock's Manufacture and Sale of Asbestos Products

63. For many years, Garlock sold asbestos-containing industrial sealing products and related materials and other asbestos-containing products, including gaskets, gasket materials and compression packing. Garlock first produced and sold asbestos-containing gaskets, compressed asbestos sheets, and packing in 1907. It sold asbestos-containing packing until 1982 and asbestos-containing gaskets until 2001. [300]

64. Garlock sold rolls or sheets of asbestos gasket material to both distributors and end-use customers who cut out gaskets. [301] Garlock also sold pre-cut asbestos gaskets for various applications, such as gaskets for use in various models of boilers.[302]

65. In addition to gaskets and gasket material, Garlock sold asbestos packing in coils, spirals, and rolls.[303] Garlock also sold loose asbestos packing, a shredded asbestos material packaged in cans.[304]

66. Many Garlock products consisted of as much as 85 percent asbestos; most were of the chrysotile variety, but some Garlock products contained crocidolite asbestos.[305] In general,

[300] For example, Garlock made asbestos-containing tape, expansion joints, hydraulic components, and asbestos cloth. Heffron Dep. 23:14-23, 70:4-9, 120:2-11, 123:4-22. Nov. 13, 2012; ACC-68 at GST-EST-0108977-78; ACC-515, at 10-11; ACC-69.

[301] A gasket is a static mechanical seal that joins two or more mating surfaces, such as flanges where pipes connect, or where a pipe connects to equipment such as a valve or pump.

[302] Heffron Dep. 198:15-199:22, Nov. 13, 2012.

[303] Packing generally refers to material that forms a seal between a static component and a moving part, like a valve stem or drive shaft.

[304] Heffron Dep. 203:5-204:9, Nov. 13, 2012.

[305] ACC-69. Asbestos insulation products often contain lower percentages of asbestos. Hr'g Tr. 1469:1-1470:1, July 29, 2013 (Longo).

Garlock's products were prominently branded.[306] Garlock's gaskets and packing bore no warnings concerning the dangers of asbestos until 1977.[307]

67. Garlock's asbestos-containing gaskets and packing were sold widely to commercial, industrial and government entities that used those products to seal fluids and gases in pipes, valves, pumps, boilers, engines, and other mechanical devices.[308]

68. Industrial customers included petrochemical facilities, shipyards, steel mills, chemical plants, breweries, mining operations, and waste and water treatment plants.[309] These customers used Garlock products in, among other settings, steam lines, boilers, compressors, refrigeration equipment, engine heads, and fluid conduits.[310]

69. Garlock products were widely used by the US Navy. For example, Garlock was one of the main manufacturers of asbestos sheet gaskets commonly used at the Norfolk Naval Shipyard and the Newport News Shipyard.[311] The Navy required asbestos-containing sheet gaskets to be used in association with numerous shipboard systems including but not limited to low pressure steam systems, sea water systems, and fuel systems.[312] Spiral wound gaskets, or "Flexitallic" asbestos gaskets were typically used in connection with high pressure steam

---

[306] ACC-68 at GST-EST-0108980. *See, e.g.*, Hr'g Tr. 1393:5-18, July 26, 2013 (Magee) (noting that the conspicuous branding of Garlock's products).

[307] ACC-68 at GST-EST-0108970.

[308] *See, e.g.*, ACC-254 (EnPro Indus., Inc. 2003 10-K) at 23-24; ACC-149 (EnPro Indus., Inc. 2007 10-K) at 7.

[309] Heffron Dep. at 49:23-50:2, 60:24-61:12, 138:18-140:16, 143:25-144:17, Nov. 13, 2012; ACC-75; ACC-80.

[310] ACC-68 at GST-EST-0108978; ACC-80.

[311] Hr'g Tr. 1668:5-22, July 29, 2013 (Shoemaker).

[312] *Id.* at 1641:19-1642:22.

systems and hot water systems.[313] The gaskets typically specified for use aboard naval ships, however, were asbestos sheet gaskets used on low pressure steam systems (300 psi and below).[314]

70. Approximately 40 to 50 percent of the gaskets found in the engine rooms aboard naval ships consisted of asbestos sheet gaskets.[315]

71. As a result of the extensive distribution of Garlock products, individuals in a variety of occupations were exposed to Garlock asbestos-containing products, such as pipefitters, millwrights, shipwrights, boilermakers, and machinists.[316]

72. Individuals were exposed to asbestos fibers from Garlock products in different ways. Fibers were released from Garlock products when the products were cut or manipulated during installation, or as they were removed during maintenance.[317]

73. For example, asbestos fibers were released during the removal and installation of gaskets on Navy ships at Norfolk Naval Shipyard.[318] During maintenance of shipboard pipes and valves, gaskets had to be replaced. The exposure first occurred as old gaskets were removed from pipe flanges and valves. After the flange was separated, the old gasket had to be removed.

[313] *Id*. at 1663:7-21.

[314] *Id*.

[315] *Id*. at 1663:7-1664:16.

[316] Grant Dep. 200:4-8, Nov. 1, 2011; Hr'g Tr. 1473:18-1474:3, July 29, 2013 (Longo).

[317] Hr'g Tr. at 1474:13-1475:13, 1514:11-24, July 29, 2013 (Longo).

[318] Hr'g Tr. 1652:15-1679:11, July 29, 2013 (Shoemaker).

74. In many cases, the old gasket would be dried out and firmly stuck to the seating areas of the flange, such that removal required cleaning with a power-driven wire brush, as well as scraping with a variety of tools.[319]

75. The removal process produced dust, particularly during wire-brushing.[320] Re-assembling the flange required the fabrication and installation of a new gasket. In most cases, the worker cut the new gasket from rolls of sheet gasket material. The worker cut the sheet and placed it against the flange to mark the bolt holes and flange openings. Bolt holes were cut out with punches and knives were used to cut out the flange openings.[321] This process of cutting and installing a new gasket also could also produce substantial amounts of asbestos-containing dust.[322]

76. Asbestos fibers can cause a variety of illnesses. These include non-cancerous lung diseases (called "non-malignant" diseases), and cancers such as mesothelioma. Non-malignant diseases include, for example, asbestosis, a pulmonary insufficiency caused by destruction of the air sacs in lung tissue.[323]

77. Mesothelioma is a rare form of cancer in which cancerous cells are found in the mesothelium, a protective sac that covers most of the body's internal organs.[324] Mesothelioma

---

[319] Hr'g Tr. 1671:15-1673:13, July 29, 2013 (Shoemaker); Borgen Dep. 40:22-23, 41:3-12, June 1, 2000; Hyder Dep. 25:18-26:5, 26:6-7, 10, 28:5-12, 28:15-21, Mar. 15, 2000 (Vol. 1); Isaacs Dep. 100:21-101:7, June 1, 2000; Maney Dep. 43:21-45:9, May 9, 2001.

[320] Hr'g Tr. 1647:17-25, July 29, 2013 (Shoemaker).

[321] Hr'g Tr. 1669:13-1671:14, July 29, 2013 (Shoemaker).

[322] Hr'g Tr. 1671:10-14, July 29, 2013 (Shoemaker); Hr'g Tr. at 1472:22-1475:19, July 29, 2013 (Longo).

[323] *In re Joint E. & S. Dist. Asbestos Litig.*, 129 B.R. 710, 739-40 (E. & S.D.N.Y. 1991), *judgment vacated on other grounds by* 982 F.2d 721 (2d Cir. 1992).

[324] Hr'g Tr. 1837:19-1838:4, July 30, 2013 (Brody).

generally kills victims within two years of diagnosis.[325] The latency period for mesothelioma is 35 years.[326]

78. Unlike many other cancers, for which there are multiple, well-documented causal factors, mesothelioma is uniquely associated with asbestos exposure.[327] Mesothelioma is caused by both chrysotile and amphibole forms of asbestos.[328]

C. Garlock's Asbestos Litigation History

79. Asbestos litigation began in the mid-1970s. Litigation initially focused on large asbestos suppliers and insulation companies who had stopped manufacturing and selling asbestos-containing products in the 1970s, most notably Johns-Manville.[329] Other defendants were able to remain in a peripheral role while Manville took the lead defending and settling cases.[330]

80. In 1982, less than a decade after the litigation began, Manville filed for bankruptcy.[331] When Manville filed for bankruptcy, plaintiffs began to focus their efforts elsewhere, developing the case against other defendants.[332]

---

[325] *In re Joint E. & S. Dist. Asbestos Litig.*, 129 B.R. at 740; Hr'g Tr. 1866:4-7, July 30, 2013 (Brody).

[326] Hr'g Tr. 355:23-356:5, July 23, 2013 (Garabrant); Hr'g Tr. 469:15-18, July 23, 2013 (Sporn); Hr'g Tr. 1083:9-14, July 25, 2013 (Weill).

[327] Hr'g Tr. 1971:2-11, July 30, 2013 (Brodkin).

[328] Hr'g Tr. 2104:7-2105:19, July 31, 2013 (Welch).

[329] Hr'g Tr. 3420:11-3421:19, Aug. 6, 2013 (Hanly); Hr'g Tr. 3539:15-3540:4, Aug. 7, 2013 (Rice); Hr'g Tr. 3478:10-14, Aug. 7, 2013 (McClain); Hr'g Tr. 3796:13-20, Aug. 8, 2013 (Hanly).

[330] Hr'g Tr. 3431:25-3433:19, 3426:13-3427:22, Aug. 6, 2013 (Hanly).

[331] Hr'g Tr. 3426:13-16, Aug. 6, 2013 (Hanly).

[332] Hr'g Tr. 3540:5-8, Aug. 7, 2013 (Rice).

81. Additional asbestos bankruptcies then occurred throughout the 1980s and 1990s, including those of Raybestos Manhattan, Celotex, Eagle Picher, and Keene.[333] As these defendants filed for bankruptcy, a newer generation of peripheral defendants became the focus of litigation.[334] The early 2000s saw this cycle continue, with bankruptcies such as Owens Corning, U.S. Gypsum, and Babcock & Wilcox.[335]

82. Meanwhile, the nature of asbestos claims was changing. In the 1990s, claims by individuals suffering from non-malignant asbestos diseases predominated. As the exposed population aged, however, the type of claimant changed. Many individuals who had been exposed to massive amounts of asbestos-containing material as insulators began to die off. The exposure profile of the claimant population changed somewhat over time.[336]

83. Courts also began to adopt various measures to limit non-malignant claims, such as moving malignant cases ahead in the trial queue.[337] As a result, throughout the 2000s, asbestos litigation began to focus increasingly on mesothelioma claims.[338] Today, mesothelioma and other cancer claims predominate in asbestos litigation.[339]

84. Garlock was first named in an asbestos personal injury case in 1975.[340] When Manville filed for bankruptcy in 1982, Garlock joined other defendants in an unsuccessful

---

[333] Hr'g Tr. 3426:2-12, Aug. 6, 2013 (Hanly).

[334] *See In re Joint E. & S. Dist. Asbestos Litig.*, 129 B.R. at 747.

[335] Hr'g Tr. 3431:21-3435:9, Aug. 6, 2013 (Hanly).

[336] Hr'g Tr. 3472:4-3473:24, Aug. 7, 2013 (McClain).

[337] Hr'g Tr. 3550:25-3551:15, Aug. 7, 2013 (Rice).

[338] Hr'g Tr. 3551:11-15, Aug. 7, 2013 (Rice).

[339] *Id.*

[340] ACC-19 (EnPro Indus., Inc. 2005 10-K) at 30. Garlock was involved in the *Borel* case, the first appellate decision to apply strict products liability in tort to asbestos claims. Hr'g Tr. 81:24-
(Footnote continued on next page.)

motion to have asbestos litigation around the country stopped because Manville had been bearing the majority of defense costs and settlement outlays, to the advantage of less prominent defendants, but was no longer participating in the litigation by virtue of the automatic stay.[341] By the early 1990s, Garlock was being sued by more than 20,000 asbestos claimants annually.[342] Nevertheless, throughout the 1980s and well into the 1990s, Garlock was able to remain as a peripheral defendant.[343]

85. Garlock's experience changed in the late 1990s and early 2000s. Around this time plaintiffs began to develop the liability case against Garlock by, for example, using experts to explain how Garlock's products emitted asbestos fibers.[344]

86. Garlock's prominence as an asbestos defendant began to increase. By the early 2000s, Garlock was receiving about 50,000 claims annually, including between 1,100 and 1,900 mesothelioma claims per year.[345] In addition, by the latter half of the 2000s, and consistent with the general trends noted above, mesothelioma claims predominated against Garlock.[346]

87. Mesothelioma claimants who sued Garlock asserted a range of causes of action under various state laws, such as strict products liability, failure to warn of the hazards of

---

(Footnote continued from previous page.)
82:13, Mar. 3, 2011 (Glaspy). *See Borel v. Fibreboard Paper Prods. Corp.*, 493 F.2d 1076 (5th Cir. 1973).

[341] Hr'g Tr. 3426:13-3427:22, Aug. 6, 2013 (Hanly); ACC-343.

[342] ACC-14 at GST-EST-120780.

[343] Hr'g Tr. 3876:8-21, Aug. 8, 2013 (Peterson).

[344] Hr'g Tr. 3874:9-22, Aug. 8, 2013 (Peterson); Mahoney Dep. 50:12-53:18, Feb. 26, 2013; Hr'g Tr. 3793:10-3796:3, Aug. 8, 2013 (Hanly).

[345] ACC-14 at GST-EST-120780; Hr'g Tr. 3901:1-15, Aug. 8, 2013 (Peterson); ACC-824a at 37.

[346] Magee Dep. 69:5-71:10, Jan 23, 2013.

asbestos, and negligence.[347] They alleged that workers cutting and removing Garlock's asbestos-containing gaskets and packing were exposed to dangerous quantities of airborne asbestos fibers from those products, as were other workers in the workplaces where such activities took place.[348]

88. Plaintiffs adduced at trial, among other things, that the dangers of asbestos products have been well-known since the 1930s. One of the first articles to address the potential hazards related to exposure to chrysotile asbestos was published in England in 1930 by Meriwether and Price.[349] Recognizing the potential danger associated with exposure to chrysotile asbestos, Meriwether and Price recommended that dust producing operations be enclosed or physically separated from the rest of the facility, that asbestos materials be wet down to suppress dust, that workers be supplied with respirators and, finally, that workers be educated so that they have an appreciation of the risk.[350] Among the processes identified by Meriwether and Price which, in 1930, were known to cause asbestosis are the sawing, grinding, and turning in a dry state packings and jointings.[351]

89. Plaintiffs contended Garlock was well aware of the danger of asbestos. Employees of Garlock had attended meetings of the Asbestos Textile Institute ("**ATI**") in the mid and late 1950s where presentations were made regarding issue of asbestos and cancer of the lung.[352] Garlock was also aware of the particular risk of mesothelioma. At a meeting of the ATI

[347] Hr'g Tr. 57-69, Feb. 17, 2011 (Simon); Hr'g Tr. 3458:24-3459:24, Aug. 7, 2013 (McClain).

[348] Hr'g Tr. 57-69, Feb. 17, 2011 (Simon).

[349] Hr'g Tr. 1732:16-24, 1733:19-1734:21, July 30, 2013 (Templin).

[350] *Id*. at 1735:3-22.

[351] *Id*. at 1736:24-1737:22.

[352] *Id*. at 1738:22-1739:25; ACC-3312; ACC-3313.

in 1969, it was acknowledged that the "asbestos hazard can be controlled except for mesothelioma."[353]

90. Garlock raised a variety of defenses to these claims. It maintained that it had no duty to warn; that the asbestos fibers in its products were "encapsulated" so that they did not emit dangerous quantities of fibers; that its asbestos-containing products contained mainly chrysotile, which Garlock alleged does not cause mesothelioma; and that plaintiffs' mesothelioma must be attributed to exposures to other asbestos products, such as insulation that Garlock did not manufacture or sell but that was present in the industrial settings where its products were used.[354] Garlock deployed these defenses consistently throughout the 1990s and 2000s.[355] The same "encapsulation," "chrysotile," and "low-dose" defenses are commonly asserted by other defendants still in the tort system.[356]

D. Garlock's Management of Asbestos Liability

91. Garlock resolved the overwhelming majority of claims consensually—by settlement or voluntary dismissal.[357] Although Garlock faced approximately 700,000 asbestos claims, Garlock tried only 245 cases to verdict, or less than 0.1 percent.[358] With respect to

[353] Hr'g Tr. 1744:2-1745:9, July 30, 2013 (Templin); ACC-3315.

[354] ACC-17 (2002 EnPro Indus., Inc. Form 10-K) at 16; ACC-18 (2004 EnPro Indus., Inc. Form 10-K) at 25; ACC-19 (2005 EnPro Indus. Inc., Form 10-K) at 31.

[355] Grant Dep. 128:11-129:25, 130:2-132:5, 132:7-133:5, 133:7-15, Nov. 1, 2011.

[356] *See* Hr'g Tr. 3464:7-20, Aug. 7, 2013 (McClain).

[357] Grant Dep. 172:25-173:12, Nov. 1, 2011; Garlock 30(b)(6) Dep. (Magee) 23:24-24:2, Jan. 24, 2013; Hr'g Tr. at 3208:7-11, Aug. 6, 2013 (Magee).

[358] Grant Dep. 172:25-173:12, Nov. 1, 2011; Hr'g Tr. 3889:2-7, Aug. 8, 2013 (Peterson).

mesothelioma claims, Garlock faced more than 20,000 cases, but tried only 83 to verdict, less than one-half of one percent.[359]

92. As Garlock disclosed in its parent's annual reports, it considered various merits-based factors when entering into settlements, including the plaintiff's age and occupation; the jurisdiction where the action was brought; the presence of other possible causes of the plaintiff's mesothelioma; alternative sources of payment available to the plaintiff from co-defendants and section 524(g) trusts; the availability of legal defenses; and whether the action was an individual one or part of a group.[360] Garlock tried cases when they determined a settlement demand was not reasonable.[361] Before Garlock paid a settlement it required that the plaintiff provide both medical records confirming diagnosis of disease and evidence that he or she had worked with or around an asbestos product of Garlock.[362] When settling a case, Garlock did not pay to resolve more than its own several share of liability (and that of affiliated companies).[363] Consequently, in settlement, Garlock obtained releases for all affiliated companies, but not for unrelated companies.[364]

93. Garlock's settlement-based strategy allowed Garlock to maintain a low profile in the litigation throughout most of the 1990s.[365] As part of this strategy, Garlock often settled

---

[359] Hr'g Tr. 2918:22-2919:4, Aug. 5, 2013 (Bates).

[360] ACC-156 (EnPro Indus., Inc. 2006 10-K) at 34.

[361] ACC-254 (EnPro Indus., Inc. 2003 10-K) at 79; *see also* Hr'g Tr. 3204:1-3205:9, Aug. 6, 2013 (Magee).

[362] Magee Dep. 300:5-19, Apr. 11, 2013; Hr'g Tr. 3195:7-20, Aug. 6, 2013 (Magee); Hr'g Tr. 2363:23-2364:15, Aug. 1, 2013 (Turlik).

[363] Ferrell Dep. 145:22-146:17, Jan. 11, 2013.

[364] Grant Dep. 40:2-15, Nov. 1, 2011; Hr'g Tr. 3195:21-3196:2, Aug. 6, 2013 (Magee).

[365] Hr'g Tr. 3873:2-18, Aug. 8, 2013 (Peterson).

claims in groups.[366] For example, Garlock settled 81 percent of mesothelioma claims in groups in the period 1996 to 2000.[367] As plaintiffs began to develop the liability case against Garlock in the 2000s, Garlock relied even more on group settlements.[368] It preferred to settle early, that is, before devoting resources to investigating the details of claims.[369]

94. Settlement allowed Garlock to control its exposure to catastrophic verdicts. Garlock acknowledged this risk in securities filings, when it explained that the risk of adverse verdicts led it to use group settlements.[370]

95. Garlock's own internal assessments underscore its concerns about potentially adverse verdicts. Garlock's internal procedures for approving settlements involved the creation of a document called a "Major Expense Project Approval" form ("**MEA**") to memorialize the reasons for entering into the proposed settlement.[371] Internal procedures required that MEAs for individual and group settlements over certain thresholds be signed by senior management. The MEAs confirm Garlock was aware of and concerned about substantial adverse verdicts, and settlement was motivated by that concern. The MEAs recognize that settling in groups eliminated these risks in a cost-effective way.[372] In other words, Garlock priced risk across

[366] ACC-19 (EnPro Indus., Inc. 2005 10-K) at 37.

[367] Hr'g Tr. 3880:12-21, Aug. 8, 2013 (Peterson); ACC-824a at 17.

[368] Hr'g Tr. 3880:22-3881:6, Aug. 8, 2013 (Peterson); ACC-824a at 17.

[369] Hr'g Tr. 2576:3-12, Aug. 1, 2013 (Magee); Hr'g Tr. 3196:7-16, Aug. 6, 2013 (Magee).

[370] ACC-149 (EnPro Indus., Inc. 2007 Form 10-K) at 33.

[371] *See, e.g.,* ACC-754 at GST-EST-0556312.

[372] ACC-341; ACC-754 at GST-EST-0556290.

batches of claims and sought to extinguish as many claims as possible with an eye to minimizing its overall cash outlays for asbestos matters.[373]

96. Garlock's inside and outside counsel were aware of the risk of adverse liability findings at trial, and weighed those risks carefully when settling cases.[374]

97. Despite the threat of adverse verdicts, Garlock did try mesothelioma cases from time to time. While it won more often than it lost, Garlock also suffered the catastrophic verdicts it feared. The *Treggett* case in California was one such case, where Garlock suffered a verdict in excess of $22 million in 2005, including punitive damages.[375] While Garlock typically appealed these losses, and sometimes settled them for an amount less than the jury verdict, even the appeal bonds required could affect Garlock's overall financial situation negatively, by tying up needed cash.[376]

98. Garlock avoided these risks by entering into group settlement arrangements with individual plaintiff law firms. Group settlements took many forms. Some were formal written

---

[373] Hr'g Tr. 3122:21-3123:1, Aug. 5, 2013 (Magee).

[374] Hr'g Tr. 4662:19-25, Aug. 22, 2013 (Glaspy). *See also* Hr'g Tr. 3251:18-20, Aug. 6, 2013 (Magee) ("And there's no question, absolutely no question, that that made these dangerous cases with real risks at trial.") (discussing ACC-770); Hr'g Tr. 3237:3-4, Aug. 6, 2013 (Magee) ("There is certainly risk and expense, and it's prudent to resolve it. I'll agree with that conclusion."); Hr'g Tr. 3240:20-3241:5, Aug. 6, 2013 (Magee) (discussing ACC-767); Hr'g Tr. 3249:21-3250:6, Aug. 6, 2013 (Magee) (discussing ACC-770); Hr'g Tr. 3262:6-13, Aug. 6, 2013 (Magee) (discussing Fowers case); Hr'g Tr. 2376:7-8, Aug. 1, 2013 (Turlik) ("When we settle a case, it's for two reasons. It's to eliminate trial risk and trial costs. So, yes."); Hr'g Tr. 2532:13-18, Aug. 1, 2013 (Turlik); Mahoney Dep. 27:23-31:6, Feb. 26, 2013; Drake Dep. 58:11-59:11, Nov. 7, 2012; Henzel Dep. 32:15-19, Nov. 14, 2012; O'Reilly Dep. 169:7-19, Feb. 22, 2013; Grant Dep. 216:11-18, Nov. 1, 2011; Hr'g Tr. 88:6-9, Mar. 3, 2011 (Glaspy) (Q. "As a seasoned defense attorney, you recognized, didn't you, that Garlock had good and sufficient reason to settle its cases? A. Yes, the risk of trial.").

[375] ACC-244.

[376] Hr'g Tr. 3075:2-24, Aug. 5, 2013 (Magee); Hr'g Tr. 3262:14-22, Aug. 6, 2013 (Magee). On occasion, Garlock also settled cases during or after trial but before a verdict was reached. Hr'g Tr. 2304:13-2310:6, Aug. 1, 2013 (Turlik).

arrangements designed to last for several years setting out target average settlement amounts and annual caps on the amounts that would be paid to claimants of a given plaintiff law firm.[377] Others were less formal understandings by which Garlock would negotiate groups of cases on a yearly basis, or as cases were periodically set for trial.[378]

99. When Garlock settled, it was aware that plaintiffs often had exposure to other asbestos-containing products.[379] It never, however, required representations or other provisions concerning those other exposures, or trust claims that the plaintiffs may make as a result of those exposures, in its settlements.[380]

100. Until the late 2000s, Garlock settled cases against the backdrop of its available insurance resources. Beginning in the 1980s, Garlock had negotiated a series of "coverage in place" agreements with its insurers so that by the late 1990s, Garlock was receiving periodic payments of funds from insurers to deal with asbestos litigation.[381] Some insurers retained the right to audit settlements. Garlock has passed all such audits that have been completed.[382] Garlock's overall strategy for managing asbestos liability focused on arranging settlements so

[377] *E.g.*, ACC-215; *see also* Ferrell Dep. 69:7-76:3, 76:6-77:15, Jan. 11, 2013.

[378] *E.g.*, ACC-658.

[379] Hr'g Tr. 2526:20-2528:10, Aug. 1, 2013 (Turlik); Hr'g Tr. 3133:3-9, 3136:3-7, Aug. 5, 2013 (Magee).

[380] Hr'g Tr. 2528:5-16, Aug. 1, 2013 (Turlik); Hr'g Tr. 3136:14-25, Aug. 5, 2013 (Magee); 4666:10-14, Aug. 22, 2013 (Glaspy).

[381] Grant Dep. 208:18-209:20, Nov. 1, 2011; *see also* Hr'g Tr. 3207:12-3203:22, Aug. 6, 2013 (Magee).

[382] Barry Dep. 137:2-139:3, 139:17-141:19, Nov. 6, 2012.

that the timing of insurance receipts matched settlement payments as closely as possible, thereby reducing the effect of the settlements on net income and shareholders' equity.[383]

101. By the mid 2000s, however, Garlock recognized that insurance receipts would soon be fully committed and asbestos settlements would begin to have a more visible impact on the company's financials.[384] One result is that, Garlock began to cite Garlock's tightening financial situation in negotiations with plaintiffs' firms for lower settlements.[385]

102. Throughout its decades in the tort system, Garlock had sophisticated in-house personnel dedicated to managing Garlock's asbestos litigation and a nationwide roster of outside defense counsel.[386]

E. Garlock's Prepetition Estimates of Liability

103. Prior to filing their bankruptcy petition, Garlock and its corporate parents regularly estimated their present and future asbestos liabilities using an estimation method based on Garlock's own resolution history and epidemiologically-derived forecasts of future claims. The first estimate described in testimony is one prepared for Garlock's parent company, Coltec Industries, in connection with a tax issue in the mid-1990s.[387]

[383] Magee Dep. 36:19-25, 42:19-49:21, Jan. 23, 2013; Hr'g Tr. 3366:21-3367:4, Aug. 6, 2013 (Magee).

[384] Magee Dep. 131:7-132:9, Jan. 23, 2013; Hr'g Tr. 3368:2-12, Aug. 6, 2013 (Magee).

[385] Hr'g Tr. 3878:10-19, Aug. 8, 2013 (Peterson); Hr'g Tr. 4640:11-4641:1, Aug. 22, 2013 (Glaspy).

[386] ACC-7; ACC-9; ACC-10.

[387] *See, e.g.*, ACC-171.

104. Garlock's ultimate parent, EnPro Industries, Inc., used a similar estimation method for its periodic internal management estimates of Garlock's asbestos related liability until 2010.[388]

105. Dr. Charles Bates, Garlock's estimation expert here, also prepared estimates of Garlock's present and future asbestos liabilities for EnPro's quarterly and annual financial reports from 2005 until Garlock went bankrupt in 2010 using a variant of the same method.[389]

F. Expert Estimates of Aggregate Liability for Mesothelioma Claims

i. Dr. Mark A. Peterson

106. To estimate Garlock's aggregate liability for present and future mesothelioma claims, Dr. Peterson makes use of Garlock's history of resolving asbestos claims as recorded in Garlock's own historical claims database. Pending and future claims are estimated separately, although the steps are similar.

107. To estimate pending claims, Dr. Peterson first determines the number of pending mesothelioma claims in the Garrison Database.[390] He then reviews Garlock's settlement history during a period, called a "calibration period," to determine the percentage of claims that are likely to be paid by Garlock rather than dismissed, and to determine the average settlement value for those claims that are paid. Pending claims are then valued by multiplying the paid claims by the average settlement value.

108. Estimation of Garlock's liability for future asbestos claims proceeds along similar lines. Two extra steps are required, however. First, Dr. Peterson needs to predict how many

[388] *E.g.*, ACC-621 (EnPro Indus., Inc., 2008 10-K) at 88.

[389] Hr'g Tr. 2877:19-2879:11, Aug. 5, 2013 (Bates).

[390] Hr'g Tr. 3882:22-3883:7, Aug. 8, 2013 (Peterson).

mesothelioma claims Garlock will face in future years. Dr. Peterson does this by using a well-known forecast by Dr. William J. Nicholson and others at Mt. Sinai Hospital of the number of people who will die from mesothelioma in the United States through 2030.[391] Courts have embraced the Nicholson Study as "remarkably accurate over time."[392] Dr. Peterson extends that projection to cover additional years through 2049.

109. To estimate what fraction of the persons stricken with mesothelioma in the future will bring a claim against Garlock, Dr. Peterson divides the number of mesothelioma claims Garlock received during the calibration period by the incidence of mesothelioma during that period.[393] This fraction is called the "propensity to sue."

110. The number of mesothelioma claims Garlock will face in each future year is then estimated by multiplying Nicholson's projected number of mesothelioma deaths in that future year by the propensity to sue.[394]

111. These projected future claims against Garlock are then valued using the same formula that is used for pending claims. Average settlement values are, in future years, adjusted for inflation. The result is a series of estimates of the nominal amount Garlock would pay in each future year through 2049.

112. The final step is to reduce these future payments to a present value.[395] This is done using discount rates supplied by a financial expert.

---

[391] W.J. Nicholson et al., *Occupational Exposure to Asbestos: Population at Risk and Projected Mortality – 1980-2030*, 3-3 Am. J. Indus. Med. 259, 259-311 (1982).

[392] *In re Armstrong World Indus., Inc.*, 348 B.R. 111, 126-27 (D. Del. 2006).

[393] Hr'g Tr. 3891:6-18, Aug. 8, 2013 (Peterson).

[394] *Id.* at 3893:3-23.

[395] *Id.* at 3890:1-13.

113. Dr. Peterson applied the method described above and arrived at a preferred forecast of Garlock's present and future asbestos liability of $1.265 billion.[396]

114. Dr. Peterson chose as his calibration period the interval 2006-May 2010.[397] Because this period is the most recent period of settlement history prior to bankruptcy, Dr. Peterson believed it is the period most likely to resemble what Garlock would have experienced since June 2010 and in the future had it not filed for bankruptcy.[398] Furthermore, an analysis of mesothelioma settlement values and payment rates showed that prior to that interval, payment rates had been trending down and settlement values had been trending up. Dr. Peterson testified that the 2006-2010 interval was the most stable in this respect.[399]

115. Dr. Peterson uses average settlement amounts and payment rates from this 2006 to May 2010 period.[400] For propensity to sue, the primary estimate begins with the average from the calibration period and then continues an upward trend in the propensity to sue that existed in the 2006-2010 period. It assumes that the increasing propensity to sue will stabilize and level off after 2014.[401]

116. Dr. Peterson increases future settlement payments by a 2.5 percent inflation rate and then reduces those future payments to present value using a discount rate provided by the Committee's financial expert, Kenneth W. McGraw.

---

[396] *Id.* at 3903:13-17.

[397] *Id.* at 3884:7-16.

[398] *Id.* at 3884:7-16.

[399] *Id.* at 3885:20-3887:20.

[400] *Id.* at 3902:3-5.

[401] *Id.* at 3898:5-3899:23.

117. Mr. McGraw used U.S. Treasury securities to determine the risk-free rate because Treasury securities are accepted by financial markets as "risk free."[402] He calculated the discount rate separately for each year of future payments forecasted by Dr. Peterson. The appropriate risk-free discount rates to apply to the future indemnity payments for each year are the yields reflected in the marketplace, as of June 4, 2010, on U.S. Treasury securities with maturities corresponding to these payments. Taking account of the timing and relative weighting of the annual payments constituting the stream, the year-by-year discount rates applicable are the mathematical equivalent of an overall discount rate of 3.251 percent.[403]

118. Dr. Peterson's estimation method has been widely used in legal proceedings and in the financial and corporate communities. The method has been frequently used for planning and financial reporting by companies that face asbestos liabilities.[404] Garlock and its corporate parents have used essentially this same method for almost 20 years, beginning with Coltec in connection with a tax issue in the mid-1990s.[405] Garlock's ultimate parent, EnPro, used a variant for its periodic internal management estimate of Garlock's asbestos-related liability until 2010.[406] So, too, did Dr. Charles Bates, Garlock's estimation expert here, when he prepared

[402] McGraw Report at 4-6.

[403] *Id.* at Exh. 9.

[404] *E.g.*, Crown Holdings, Inc., Annual Report (Form 10-K) at 38 (Mar. 1, 2013) ("Projected future claims are calculated based on actual data for the most recent five years. Outstanding and projected claims are multiplied by the average settlement cost of those claims for the most recent five years."); Ingersoll-Rand PLC, Annual Report (Form 10-K) at F-44 (Feb. 14, 2013) (describing "methodology used to project the Company's total liability for pending and unasserted potential future asbestos-related claims" based on epidemiological studies estimating the number of people likely to develop diseases such as mesothelioma, propensity to sue based on most recent three-year claims history, and the average settlement and resolution value of claims for the most recent three years).

[405] *See, e.g.*, ACC-171.

[406] *E.g.*, ACC-621 (EnPro Indus., Inc. 2008 10-K) at 88.

estimates of Garlock's asbestos liabilities for EnPro's quarterly and annual financial reports from 2005 until Garlock went bankrupt in 2010.[407]

119. The criticisms of Dr. Peterson offered by Drs. Bates and Gallardo-García are without merit. The increasing trend Dr. Peterson incorporated into his propensity to sue is appropriate given Garlock's litigation history and the associated data.[408] Dr. Peterson's use of an inflation rate of 2.5 percent to increase average settlement rates in the future and an overall discount rate of 3.251 (weighted to account for the timing of payments in his forecast) are correct. And Dr. Bates was mistaken to suggest that Dr. Peterson's estimate is inflated by a failure to take into account the geographic distribution of pending claims as compared to claims settled during the calibration period of 2006 to 2010 – indeed, when this is done not just for two states, as Dr. Bates did, but nationwide, the overall settlement average increases.[409]

120. The suggestion by Drs. Bates and Gallardo-García that Dr. Peterson made data processing errors that affected his estimate is wrong. If Dr. Peterson had removed cases from the database based on information generated in the Mesothelioma Claims Questionnaire ("**MCQ**") as they suggest, it would have improperly skewed the count of mesothelioma cases lower, because the MCQ provides no basis for a correlative adjustment for mesothelioma claims misrecorded in the database as involving other asbestos diseases.[410] Dr. Peterson's assumption that pending claims would be paid over the 2010-2012 period is equivalent under his method to their being paid in 2011, but this has a negligible effect on his estimate.[411] Dr. Gallardo-García's

[407] Hr'g Tr. 2877:19-2879:11, Aug. 5, 2013 (Bates).

[408] Hr'g Tr. 3962:18-24, Aug. 8, 2013 (Peterson).

[409] *Id*. at 3963:7-3964:12.

[410] *Id*. at 3959:3-3960:21.

[411] *Id*. at 3953:4-10.

complaint that Dr. Peterson counted three verdicts in the wrong year by using the date of the last related entry in the database, rather than the year of the verdict, is off base. Using the last-related date in the database was a sensible way to assign a date to an event with multiple payment dates, particularly since Garlock often tied up verdicts on appeal for years. Furthermore, whether recognized in the year of first payment or that of last offset, these verdicts would fall within the calibration period used by Dr. Peterson, so the differences would not affect his estimate.

ii. Dr. Francine Rabinovitz

121. Dr. Rabinovitz relied on Garlock's historical claims database, which contains information concerning thousands of mesothelioma claims against Garlock and the amounts Garlock paid to resolve those claims, to prepare her estimate of Garlock's liability for pending and future mesothelioma claims.[412]

122. Dr. Rabinovitz forecasted that approximately 26,000 pending and future mesothelioma claims will be brought against Garlock.[413] She estimated that the amount of money that Garlock will need to resolve those claims is approximately $1.217 billion net present value in her adjusted indemnity case to $1.292 billion net present value in her preferred base case, including defense costs.[414] Exclusive of defense costs, Dr. Rabinovitz's estimate is between $913.4 million and $969.5 million.[415]

[412] Hr'g Tr. 4169:10-11, 4202:17-19, 4203:15-21, 4216:7-10, 4216:21-4217:11, 4223:22-24, Aug. 9, 2013 (Rabinovitz).

[413] *Id.* at 4169:23-4170:2.

[414] *Id.* at 4222:21-23.

[415] *Id.* at 4293:10-19.

123. Dr. Rabinovitz's estimation methodology consisted of six steps. First, Dr. Rabinovitz estimated the size of the population exposed to asbestos.[416] This projection was based on the Nicholson-KPMG model, which has been accepted by courts and is an adjustment to the original Nicholson model.[417]

124. Dr. Rabinovitz then estimated the proportion of persons exposed to asbestos who will develop mesothelioma.[418] Dr. Rabinovitz used the Nicholson-KPMG model's projections of mesothelioma mortality for her estimate.[419] She estimated that in excess of 27,000 individuals will contract mesothelioma in the future but testified that the actual number may be higher given that people are living much longer than in the past, when the Nicholson-KPMG model was created.[420]

125. Dr. Rabinovitz next forecasted the percentage of the population that is likely to file mesothelioma claims against Garlock in the future, known as the propensity to sue.[421] She did so by dividing the number of mesothelioma claims filed against Garlock during the calibration period by the number of mesothelioma deaths predicted by the Nicholson-KPMG model for those same years, resulting in a 79.1 percent claiming rate / propensity to sue.[422] Dr. Rabinovitz testified that in recent years, the propensity to sue Garlock was even higher, which is a trend that may occur in the future given that Garlock manufactured and sold asbestos-

[416] *Id.* at 4173:25-4174:5.

[417] *Id.* at 4174:13-14, 4174:25-4176:1.

[418] *Id.* at 4178:14-21.

[419] *Id.* at 4178:25-4179:6.

[420] *Id.* at 4176:24-4177:6, 4187:3-13; FCR-42, at 22 (Rabinovitz Demonstrative PowerPoint).

[421] Hr'g Tr. 4180:11-16, Aug. 9, 2013 (Rabinovitz).

[422] *Id.* at 4180:14-4181:14.

containing products through 2001.[423] To establish an estimate of the number of future mesothelioma claims that will be filed against Garlock, Dr. Rabinovitz then multiplied the propensity to sue by the number of mesothelioma deaths projected by the Nicholson-KPMG model in each future year.[424]

126. Dr. Rabinovitz valued Garlock's pending and future mesothelioma claims by calculating the average indemnity value during a five-year calibration period from 2005 to 2010.[425] Dr. Rabinovitz testified that this five-year calibration period was appropriate because (a) Garlock's payment rates changed in 2005, evidencing that Garlock went into a different mode of handing cases;[426] (b) the five-year period before Garlock's bankruptcy reflects the future in that Garlock's insulator co-defendants were no longer paying claims in the tort system and bankruptcy trusts were paying claimants on a regular basis, both of which trends are here to stay;[427] (c) the guidelines set forth in *In re Eagle-Picher Industries, Inc.*, 189 B.R. 681, 691 (Bankr. S.D. Ohio 1995), provide that estimators should use a debtor's most recent history, adjusted for any major changes that occurred in that period;[428] (d) Garlock's recent claims history takes into account all of the events that have occurred up to that point, including potential defenses, and places a value on them;[429] (e) beginning in 2006, the amount of money paid by

[423] *Id.* at 4215:4-9; FCR-42, at 24 (Rabinovitz Demonstrative PowerPoint).

[424] FCR-42, at 22, 24, 28 (Rabinovitz Demonstrative PowerPoint).

[425] Hr'g Tr. 4186:1-5, Aug. 9, 2013 (Rabinovitz).

[426] *Id.* at 4182:10-4183:7.

[427] *Id.* at 4185:5-15, 4210:4-8.

[428] *Id.* at 4184:7-23; Hr'g Tr. 4300:20-4301:14, Aug. 12, 2013 (Rabinovitz).

[429] Hr'g Tr. 4185:2-15, Aug. 9, 2013 (Rabinovitz).

bankruptcy trusts increased greatly;[430] and (f) the majority of the future claims against Garlock fall between 2010 and 2020, supporting the use of a recent calibration period.[431]

127. For her preferred base case estimate, Dr. Rabinovitz calculated Garlock's average settlement payment during the five-year period and then factored in the pay rate to account for the unpaid claims, resulting in an average indemnity value of approximately $39,700.[432] For her adjusted indemnity estimate, Dr. Rabinovitz calculated a weighted average indemnity value of approximately $38,500, which recognizes that (a) claims pending for six or more years may be resolved without payment, and (b) increases in claimant age and the year of first exposure to asbestos will reduce future growth in average indemnity payments.[433]

128. Dr. Rabinovitz also estimated the values of 246 settled-but-not-paid claims and 181 disputed settlement claims as placeholders to ensure that this class of claims was not overlooked or undervalued during the bankruptcy proceedings.[434] Dr. Rabinovitz estimated these claims at approximately $20.3 million net present value and emphasized that precise amounts for these claims must be determined before the formation of a § 524(g) trust.[435]

129. Dr. Rabinovitz estimated the cost of defending asbestos claims. Defense costs were estimated by calculating the defense cost share percentage of mesothelioma and lung cancer indemnities (34 percent), and then applying that percentage to pending and future liability

[430] Hr'g Tr. 4317:2-9, Aug. 12, 2013 (Rabinovitz).

[431] Hr'g Tr. 4187:24-4188:3, Aug. 9, 2013 (Rabinovitz).

[432] *Id*. at 4186:7-15; FCR-42, at 25 (Rabinovitz Demonstrative PowerPoint).

[433] Hr'g Tr. 4170:17-4172:7, Aug. 9, 2013 (Rabinovitz).

[434] Hr'g Tr. 4189:5-4190:22, 4200:19-25, Aug. 9, 2013 (Rabinovitz).

[435] *Id*. at 4189:24-4190:14; FCR-42, at 18 (Rabinovitz Demonstrative PowerPoint).

estimates.[436] Dr. Rabinovitz testified that she included defense costs in her estimate because (a) defense costs were an integral part of Garlock's prepetition decision making;[437] (b) defense costs must be considered when determining Garlock's solvency;[438] (c) estimates of defense costs are always included in SEC filings;[439] and (d) defense costs act as a proxy for trust administration expenses, ensuring that trust administration costs will not come from the trust corpus.[440]

130. Finally, using information from the Congressional Budget Office provided by the FCR's financial advisor, Mr. Joseph Radecki, Dr. Rabinovitz adjusted the future mesothelioma claims for inflation, applying a rate of between 1.0 percent and 2.3 percent (depending on the year) for her base case and between .50 percent and 1.8 percent (depending on the year) for her adjusted indemnity case.[441] Dr. Rabinovitz then applied a risk-free discount rate of 2.81 percent, which was also provided by Mr. Radecki and was based on yields in the market for U.S. Treasuries, to determine the net present value of the claims as of the petition date.[442]

[436] Hr'g Tr. 4191:13-4192:13, Aug. 9, 2013 (Rabinovitz).

[437] *Id*. at 4194:18-22; Hr'g Tr. 4292:11-14, 4297:7-13, Aug. 12, 2013 (Rabinovitz).

[438] Hr'g Tr. 4194:22-4195:1, Aug. 9, 2013 (Rabinovitz); Hr'g Tr. 4292:15-16, Aug. 12, 2013 (Rabinovitz).

[439] Hr'g Tr. 4195:1-3, Aug. 9, 2013 (Rabinovitz); Hr'g Tr. 4292:15-16, Aug. 12, 2013 (Rabinovitz).

[440] Hr'g Tr. 4195:12-24, Aug. 9, 2013 (Rabinovitz); Hr'g Tr. 4294:18-25, Aug. 12, 2013 (Rabinovitz).

[441] Hr'g Tr. 4195:25-4196:9, Aug. 9, 2013 (Rabinovitz); FCR-42, at 34 (Rabinovitz Demonstrative PowerPoint).

[442] Hr'g Tr. 4195:25-4196:9, 4197:7-24, Aug. 9, 2013 (Rabinovitz).

131. Dr. Rabinovitz's methodology, like Dr. Peterson's very similar approach, has been widely used in both legal and financial contexts. It is also tested, both in Dr. Rabinovitz's SEC reporting work and in bankruptcy cases.[443]

132. Dr. Bates raised a number of criticisms of Dr. Rabinovitz's opinion, which Dr. Rabinovitz addressed at the Hearing:

• Dr. Bates criticized Dr. Rabinovitz for not relying on Garlock's personal injury questionnaires. Dr. Rabinovitz, however, testified that she reviewed a sample of questionnaires, which contained inconsistent information, and chose to rely on the Garrison Database, which she considers the "gold standard" for claims information.[444] In addition, in assuming that 46 percent of all present and future claims will receive zero payment in her base case (and 60 percent in her adjusted indemnity case), Dr. Rabinovitz stated that she already factored in the dismissals and other issues that Garlock alleges it identified in the personal injury questionnaires.[445]

• Dr. Bates said that Dr. Rabinovitz assigned incorrect payment years to several large payments. Dr. Rabinovitz explained that she chose to use the most recent claim closing date when multiple dates were found in the Garrison Database because the most recent date best reflects the actual value.[446] She further testified that her estimates were not

[443] *Id.* at 4223:8-11.

[444] *Id.* at 4168:23-4169:11; *accord id.* at 4202:24-4203:14, 4204:8-4204:13; Hr'g Tr. 4351:9-18, Aug. 12, 2013 (Rabinovitz).

[445] Hr'g Tr. 4206:18-4207:2, Aug. 9, 2013 (Rabinovitz).

[446] *Id.* at 4201:12-4202:10; Hr'g Tr. 4332:18-23, Aug. 12, 2013 (Rabinovitz).

affected by that decision since each claim identified by Dr. Bates as having an allegedly incorrect payment year was within her five-year calibration period.[447]

• Dr. Bates stated that Dr. Rabinovitz incorrectly assumed that all pending claims are resolved in 2010 and all future claims are resolved in the same year as they are diagnosed, which resulted in payments being made in earlier years and not being discounted enough. Dr. Rabinovitz testified, however, that she made those assumptions to simplify her calculation and they had no significant impact on her estimate.[448]

• Dr. Bates asserted that Dr. Rabinovitz incorrectly valued Garlock's pending claims by not considering the age of pending claims, *i.e.*, that claims pending for longer settle for less. Dr. Rabinovitz testified that she accounted for that issue by assuming that 46 percent of claims in her base case and 60 percent of claims in her adjusted indemnity case would not be paid.[449] She further noted that Garlock's data did not demonstrate that average resolution amounts necessarily decreased based on the age of the claims.[450]

• Dr. Bates claimed that Dr. Rabinovitz applied the average settlement from the calibration period to the pending claims but failed to recognize that those claims are in jurisdictions where claimants received lower settlements. Dr. Rabinovitz explained that jurisdiction is one of many factors that could be considered, many of which cancel each other out; that she prefers to work with as much data as possible; and, therefore, relies on averages from thousands of claims rather than segregating certain jurisdictions for

[447] Hr'g Tr. 4202:11-4202:16, Aug. 9, 2013 (Rabinovitz); Hr'g Tr. 4332:11-17, 4332:24-4333:2, Aug. 12, 2013 (Rabinovitz).

[448] Hr'g Tr. 4205:4-4206:8, Aug. 9, 2013 (Rabinovitz).

[449] *Id.* at 4206:18-4207:2.

[450] *Id.* at 4207:6-9.

analysis; and that claims frequently change venue, making it inappropriate to focus on the jurisdiction of claims in an estimate.[451]

• Dr. Bates argued that Dr. Rabinovitz failed to take into account a trend showing that more and more claimants against Garlock are filing their Trust claims earlier. Dr. Rabinovitz testified, however, that asbestos trusts have a long history of paying claims and, therefore, Garlock and plaintiffs' attorneys were aware of trusts and accounted for them when settling claims.[452] Thus, Dr. Rabinovitz stated that any trust effects are already reflected in Garlock's historical claims experience.[453]

• Dr. Bates maintained that Dr. Rabinovitz incorrectly included defense costs in her estimate. Dr. Rabinovitz testified that she had a number of important reasons for doing so: (a) defense costs were an integral part of Garlock's decision-making, as argued by Dr. Bates; (b) defense costs are a necessary factor to consider when determining Garlock's solvency; (c) estimates of defense costs are always included in SEC filings; and (d) defense costs act as a proxy for trust administration expenses.[454]

• Dr. Bates argued that that Dr. Rabinovitz mistakenly included pre-petition settlement amounts in her estimate. Dr. Rabinovitz testified that she estimated the values of settled-but-not-paid and disputed claims as placeholders to ensure that class of claims was not overlooked or undervalued.[455]

---

[451] *Id.* at 4208:17-25, 4209:1-15.

[452] *Id.* at 4210:4-6, 4212:2-8.

[453] *Id.* at 4210:6-8.

[454] *Id.* at 4194:16-4195:24; Hr'g Tr. 4292:11-16, 4294:18-25, 4297:7-13, Aug. 12, 2013 (Rabinovitz).

[455] Hr'g Tr. 4188:25-4190:22, Aug. 9, 2013 (Rabinovitz); Hr'g Tr. 4200:16-4201:2, Aug. 12, 2013 (Rabinovitz).

• Finally, Dr. Bates argued that Dr. Rabinovitz erred by using inconsistent methodologies to estimate different classes of pending claims. Dr. Rabinovitz explained that the methods she used to value pending, settled-but-not-paid, and disputed claims are consistent with the available data for each group of claims: (a) pending claims were valued using average indemnity values for Garlock claims closed during the calibration period; (b) settled-but-not-paid claims were valued based on Garlock's discovery responses; and (c) disputed claims were valued based on information provided by Garlock or, if no information was available, on average indemnity payments paid to law firms with disputed claims.[456]

iii. Dr. Charles Bates

133. Dr. Bates provided two estimates. The first used a novel methodology that differed from the standard method used by Drs. Peterson and Rabinovitz. The method does not use Garlock's history of resolving asbestos cases, but instead purports to determine how the cases would be resolved in hypothetical trials under a set of assumptions that are different from the existing tort system.

134. First, for present claims, Dr. Bates analyzes 367 jury verdicts found in news reports to see how they differed based on three variables—whether a plaintiff was alive or dead, the age of the plaintiff, and the state the plaintiff lived in—and then applies those results to forecast what a jury would award of each of Garlock's 3,932 pending mesothelioma claims if it were tried to verdict against all defendants.[457]

[456] Hr'g Tr. 4186:6-15, 4188:25-4189:21, Aug. 9, 2013 (Rabinovitz).

[457] Hr'g Tr. 3908:2-3909:3, Aug. 8, 2013 (Peterson).

135. Dr. Bates then values at zero 1,755 of these pending claims based upon assumptions about who, in his view, has a viable claim based on his review of Mesothelioma Claim Questionnaire responses.[458]

136. Next, Dr. Bates purports to eliminate the liability share he thinks should be borne by solvent co-defendants and bankruptcy trusts. Dr. Bates derives this share by assuming that any mention of another company in the questionnaire or elsewhere in discovery materials, trust claims, bankruptcy balloting materials, or Rule 2019 statements was sufficient for a "verdict" and allocates that company an equal share of liability in the trial.[459] Dr. Bates finds 35 such entities, meaning that Dr. Bates divides his predicted verdict by 36, leaving Garlock with 1/36th of the liability of every case and eliminating 97 percent of liability.[460]

137. Finally, Dr. Bates decides what fraction of cases plaintiffs would win. To derive this win percentage, Dr. Bates relied on data from the 1990s, when plaintiffs won three out of 36 cases that went to trial against Garlock.[461] With this step, Dr. Bates eliminates another 92 percent of Garlock's liability for pending claims.[462]

138. Dr. Bates uses essentially the same methodology for future claims, although he simply eliminates a third of his 28,402 predicted future mesothelioma incidences based on his assumption that, in those cases, the claimants' mesotheliomas would not be related to

[458] *Id*. at 3909:13-3910:1.

[459] *Id*. at 3910:6-3911:17.

[460] *Id*. at 3911:10-12, 15-23.

[461] *Id*. at 3911:24-3912:8.

[462] *Id*. at 3912:8-11.

asbestos.[463] That assumption is not widely shared among experts in the field, and Dr. Bates offers no persuasive rationale or substantiation for it.

139. Dr. Bates' novel method is problematic in several respects.

140. First, it is unrealistic. It assumes every case Dr. Bates deems viable will be tried to verdict. Dr. Bates' present and future analysis contemplates almost 19,000 mesothelioma trials.[464] But, in its entire history, Garlock has tried only 83 mesothelioma claims to verdict in the last 20 years, less than one-half of one percent of such claims asserted against it.[465] Clearly, Dr. Bates' method posits a grossly unrealistic number of trials.[466] Second, Dr. Bates assumes that no one, neither Garlock nor any other defendant in these trials, settles, when in fact both Garlock and most other defendants settle, rather than running the risks of trial.[467] Finally Dr. Bates assumes that all exposure information in the case comes from the plaintiff when its own counsel have testified that they took steps to discover exposure information elsewhere.[468] These premises do not reflect the way that asbestos personal injury cases are brought, tried, or resolved in the tort system.

141. Next, Dr. Bates' conclusion that liability for verdicts would be split evenly 36 ways, and therefore Garlock would pay only 1/36th of any verdict, is wrong for several reasons.

---

[463] *Id*. at 3913:9-3914:14; Hr'g Tr. 4840:1-3, Aug. 22, 2013 (Bates).

[464] *Id*. at 3908:2-3909:25; Hr'g Tr. 2973:15-2974:4, Aug. 5, 2013 (Bates); Hr'g Tr. 4840:19-25, Aug. 22, 2013 (Bates).

[465] ACC-519.

[466] Garlock's own management admitted that it would not have been possible for Garlock to try every case in the tort system because, even though Garlock had "more trial teams at the end than any other defendant in litigation," it "wouldn't have the trial teams to do it," and because "[t]he judges would not give you trial time to try the cases physically." O'Reilly Dep. 108:22-109:2, Feb. 2, 2013.

[467] Hr'g Tr. 2918:22-2919:14, Aug. 5, 2013 (Bates); Hr'g Tr. 3669:3-16, Aug. 7, 2013 (Rice).

[468] Hr'g Tr. 2308:17-25, 2340:1-2344:8, Aug. 1, 2013 (Turlik).

Dr. Bates did not adequately account for differences among the jurisdiction in the law pertaining to joint tortfeasors. For example, in many states, under the principles of joint and several liability, an unsuccessful trial defendant might bear the entire judgment in a mesothelioma case, and incur the costs and risks of pursuing any contribution claims against other potentially responsible actors. "Hybrid" states recognize joint and several liability in some situations but only several liability in other. Dr. Bates indulges in a dubious assumption in supposing that Garlock's potential liability would be several in all such states. In New York, for example, a jury in a mesothelioma case found Garlock reckless,[469] a determination that held it liable for 100 percent of the plaintiffs' damages despite what in general is a comparative scheme in that state.[470] Dr. Bates admitted that he did not present in his expert report or direct testimony the results of any calculations under these various scenarios.[471]

142. Dr. Bates' calculation that Garlock would share a verdict with 35 other entities also assumes that the average verdict would be against Garlock, 13 other solvent co-defendants and 22 bankrupt entities, or trusts.[472] The method by which Dr. Bates arrives at these numbers contains errors.

---

[469] ACC-404. Although that verdict was ultimately overturned, the appellate ruling did not address the finding of recklessness. *See In re Eighth Judicial Dist. Asbestos Litig. (Reynolds v. Amchem Prods., Inc.)*, 32 A.D.3d 1268 (N.Y. App. Div. 2006), *rev'd*, 872 N.E.2d 232 (N.Y. 2007). Verdicts returned just days before the hearing show that the prospect of a recklessness finding remains a serious risk to defendants who try mesothelioma claims in New York. *See* ACC-750a at 8 (finding that Cleaver Brooks acted with "reckless disregard"); ACC-750b at 9 (same as to Cleaver Brooks and Burnham); ACC-750c at 12 (same as to Cleaver Brooks); ACC-750d at 9 (same as to Cleaver Brooks and Burnham).

[470] *Compare* Hr'g Tr. 2373:14-2374:22, Aug. 1, 2013 (Turlik); ACC-747.

[471] Hr'g Tr. 2935:3-24, Aug. 5, 2013 (Bates).

[472] *Id*. at 2949:2-4.

143. First, Dr. Bates counts as responsible co-defendants any company referenced in discovery materials such as interrogatory responses or depositions.[473] But such a reference does not itself establish liability. As Garlock's own defense counsel confirmed, defendants have the burden of proving a co-defendant's liability if they wish to allocate responsibility to that co-defendant.[474] And, on average, Garlock shared its verdicts with less than three co-defendants during its entire verdict history.[475]

144. In arriving at his figure of 22 bankrupt entities with which Garlock would share a verdict, Dr. Bates looked to trust claims he found in questionnaire responses, bankruptcy ballots, and Rule 2019 statements.[476] None of these sources, however, can be equated to a share of liability in the context of a jury verdict.

145. Just because someone makes a claim to a trust does not mean that the bankrupt company that formed the trust would have been assessed a share of the verdict in a trial. As the Committee's witnesses explained, not every claim to a trust is completed or paid, and many claims that trusts do pay are paid because of the application of presumptive exposure criteria, such as site lists, that do not apply in the tort system.[477]

146. Nor do bankruptcy ballots constitute admissions of exposure to products such that they could "count" as shares in a verdict.[478] They reflect at most a determination by counsel that a claimant he or she represents *might* have a claim affected by the bankruptcy plan creating the

[473] *Id*. at 2947:6-17.

[474] Hr'g Tr. 2378:6-16, Aug. 31, 2013 (Turlik).

[475] Hr'g Tr. 3921:23-25, 3922:17, Aug. 8, 2013 (Peterson).

[476] Hr'g Tr. 2950:5-24, Aug. 5, 2013 (Bates).

[477] Hr'g Tr. 3709:18-3710:20, Aug. 7, 2013 (Patton).

[478] Hr'g Tr. 3682:13-25, Aug. 7, 2013 (Patton).

trust.[479] As plaintiffs' counsel explained, they generally completed bankruptcy ballots for claimants if they could not rule out exposure to a bankrupt's products, a far different standard than one which would establish liability in a tort suit.[480]

147. Finally, a law firm's Rule 2019 statements filed in a bankruptcy case cannot inform anyone about whether or not the bankrupt would ultimately bear a share of liability for the plaintiff's injuries. The 2019 filings are designed to inform the court and other parties of the identity of a lawyer's clients when the lawyer acts for multiple entities in a bankruptcy case, not whether those entities are going to file a claim or participate in any particular way in the case.[481]

148. Dr. Bates' use of an 8.3 percent "win rate" for plaintiffs against Garlock at trial is also unrealistic because it is based on data from the 1990s. The litigation environment for Garlock changed dramatically in the 2000s, as mesothelioma cases began to form a larger part of Garlock's case mix and plaintiffs developed their case against the company.[482] As a result, Garlock moved from being a peripheral defendant to a principal defendant.[483] The transition from peripheral defendant to principal defendant is not reversible.[484] Indeed, Garlock lost 36 percent of the cases it took to verdict between 2001 and 2010.[485]

---

[479] Hr'g Tr. 3692:3-3694:7, Aug. 7, 2013 (Patton).

[480] *E.g.*, Belluck & Fox 30(b)(6) Dep. (Belluck) 90:4-92:2, Dec. 14, 2012; David Law Firm 30(b)(6) Dep. (Cooper) 50:22-51:6, Feb. 1, 2013; Waters & Kraus 30(b)(6) Dep. (Kraus) 95:15-96:18, Jan. 14, 2013.

[481] Hr'g Tr. 3788:5-18, Aug. 8, 2013 (Patton).

[482] *See* section I.B.1, *supra*.

[483] Hr'g Tr. 3793:10-3796:3, Aug. 8, 2013 (Hanly).

[484] Hr'g Tr. 3435:10-18, Aug. 6, 2013 (Hanly).

[485] Hr'g Tr. 2572:4-16, Aug. 1, 2013 (Magee).

149. Dr. Bates presented a second estimate of liability under the claims resolution procedures set forth in the Plan of Reorganization filed by Garlock in late 2011. This estimate is irrelevant and unhelpful for the present task, which is to measure the overall financial burden of mesothelioma claims on the estate. The Committee and the FCR assert that the plan may be unconfirmable for many different reasons.[486] The constituency of asbestos claimants, moreover, will likely reject the plan as an assault on their rights and will not support it.

150. Second, the estimate is irrelevant because, as a practical matter, Garlock's plan will not likely be implemented in its current form. Among other things, the plan contemplates an injunction pursuant to 11 U.S.C. § 524(g). To obtain § 524(g) protection for Garlock, the plan must be approved by at least 75 percent of asbestos creditors.[487] The asbestos creditors, however, are unlikely to approve Garlock's plan as currently drafted.[488]

151. Finally, at trial Dr. Bates provided an estimate of Garlock's mesothelioma liability through 2059 using his pre-bankruptcy methodology, based on Garlock's own resolution history.[489] Using that methodology, he estimates a liability range of $330 million to $670 million on a net present value basis.[490]

---

[486] The Committee filed objections to the disclosure statement arguing that the plan is unconfirmable for a variety of reasons. Objection of the Official Committee of Asbestos Personal Injury Claimants to the Debtors' Proposed Disclosure Statement, filed January 19, 2012 [Dkt. No. 1808]. The Court has not yet ruled on those objections, but finds that they raise important issues.

[487] 11 U.S.C. § 524(g)(2)(B)(IV)(bb).

[488] Hr'g Tr. 3610:11-3622:16, Aug. 7, 2013 (Rice).

[489] Hr'g Tr. 2824:4-2827:15, Aug. 2, 2013 (Bates).

[490] *Id.*

G. Medical and Science Issues

152. There is a ongoing debate in the medical literature between those that believe exposure to low dose of chrysotile can cause mesothelioma and those that hold the opinion that exposure to chrysotile cannot cause mesothelioma except in extremely high doses.[491]

153. For more than thirty years, manufacturers of chrysotile asbestos products, including Garlock, have defended lawsuits involving their products by asserting the low dose chrysotile defense.[492] The "low dose chrysotile defense" addressed in this proceeding was raised in every mesothelioma case that Garlock faced as a defendant in the tort system.[493]

154. The low dose chrysotile defense was taken into account in deciding whether and at what price to resolve mesothelioma cases against Garlock.[494]

i. Asbestos Released by Garlock Products

155. As Dr. Longo explained, Garlock's claim that the asbestos in its gaskets were "encapsulated" and, therefore, harmless did not hold up once the gaskets were cut or abraded in any fashion.[495] The synthetic rubber binder does not penetrate the asbestos fiber bundles contained in the manufactured product which contain hundreds, if not thousands, of individual asbestos fibers. When the product is cut or abraded, the fiber bundles are ripped open, releasing those individual fibers.[496]

---

[491] Hr'g Tr. 1048:3-1049:13, 1056:21-1057:6, 1058:2-23, July 25, 3013 (Weill).

[492] Hr'g Tr. 3635:24-3636:2, Aug. 7, 2013 (Rice).

[493] Hr'g Tr. 3464:7-20, Aug. 7, 2013 (McClain); Hr'g Tr. 3087:21-3088:10, Aug. 5, 2013 (Magee).

[494] Hr'g Tr. 1385:17-1386:4, July 26, 2013 (Magee); Hr'g Tr. 3122:6-14, Aug. 5, 2013 (Magee); Hr'g Tr. 2531:2-9, Aug. 1, 2013 (Turlik).

[495] Hr'g Tr. 1478:6-23, July 29, 2013 (Longo).

[496] *Id*. at 1479:10-23.

156. The actual concentrations of asbestos dust measured during fabrication and removal of asbestos gaskets ranged widely from Mr. Boelter's "non-quantifiable" values of less than .007 f/cc,[497] to Mr. Liukonen's 0.13 f/cc for hand scraping with no controls,[498] to the 1.3 f/cc average for the MAS fabrication studies,[499] to the MAV fabrication range of 2.2 to 2.3 f/cc,[500] to Dow Chemical's 2 to 5 f/cc range for cutting gaskets,[501] to the Industrial Hygiene Foundation study's finding of 4.58 f/cc for removing a Garlock sheet gasket,[502] to the MAS range for removal by a wire brush powered by an electric drill of 15 to 31 f/cc,[503] to the Dow Chemical power wire brush removal of 18 f/cc,[504] to the Shell Oil Company power wire brush removal of 28.4 f/cc.[505]

157. The specific level of airborne asbestos dust generated from work with gaskets and packing fluctuates due to the many variables associated with that work including the size of the flange, the type of gasket used—full face or ring, the method used to remove the gasket, the thickness of the gasket and the temperature of the system in which the gasket was encased.[506]

---

[497] Hr'g Tr. 674:24-25, July 24, 2013 (Boelter).

[498] Hr'g Tr. 584:5-8, July 24, 2013 (Liukonen).

[499] Hr'g Tr. 1475:6-13, July 29, 2013 (Longo).

[500] *Id*. at 1476:10-13.

[501] Hr'g Tr. 921:24-922:2, July 25, 2013 (Henshaw).

[502] Hr'g Tr. 1514:11-24, July 29, 2013 (Longo).

[503] *Id*. at 1499:14-1500:10.

[504] *Id*. at 1521:21-1522:2.

[505] Hr'g Tr. 604:4-605:6, July 24, 2013 (Liukonen).

[506] Hr'g Tr. 1505:5-1507:4, July 29, 2013 (Longo).

158. However, the primary factor that dictates the level of asbestos dust generated by the removal of Garlock gaskets is the amount of residue that is left on the flange after the gasket is scraped off.[507]

159. In the MAS studies, for example, the concentration of asbestos dust measured during power wire brushing ranged from 0.4 f/cc when the gasket simply fell out and for the most part remained intact, to 21 f/cc when the gasket was tightly adhered.[508] Accordingly, the difference in the results of Dr. Longo's studies and those of Mr. Boelter is readily explained by the fact that the gaskets removed by Mr. Boelter were removed intact with little residue while those in the MAS studies were tightly adhered to the flange face necessitating the removal of substantial gasket residue by mechanical means.[509]

160. Regarding which set of measurements is more reliable, Mr. Shoemaker's testimony was helpful. He testified about his experience observing and supervising thousands of shipyard workers who fabricated, installed and/or removed asbestos-containing sheet gaskets and packing, the sequencing of activities that would take place during the overhaul of Naval vessels, as well as the safety controls and regulations pertaining to asbestos gaskets and insulation.[510] He confirmed that Dr. Longo's videotapes depicting the tools and methods pertaining to the fabrication and removal of asbestos sheet gaskets were substantially similar to the ways in which

[507] *Id*. at 1496:16-1497:4.

[508] *Id*. at 1504:13-1505:4.

[509] Hr'g Tr. 742:12-744:14, July 24, 2013 (Boelter), Hr'g Tr. 1494:23-1495:8, 1504:23-1505:4, 1522:14-1523:10, 1528:4-12, July 29, 2013 (Longo).

[510] Hr'g Tr. 1641:19-1648:11, 1669:13-1670:25, 1685:3-1688:5, July 29, 2013 (Shoemaker).

asbestos gaskets were fabricated and removed by real-world workers in the shipyard and aboard ships during overhauls.[511]

161. Regardless of where on the spectrum of exposures such a worker's task falls, he or she will still be exposed to an amount of asbestos that well exceeds background levels. In fact, the potential inhalation of asbestos from the low end of occupational exposures to gaskets and packing is nearly a thousand times higher than any ambient air levels.

162. For example, one day working in an environment with a concentration of 0.1 f/cc would lead to the potential inhalation of 384,000 fibers compared to a single day's worth of ambient air exposure that would only amount to 432 fibers.[512]

163. At the higher levels of exposure caused by the removal of gaskets by power wire brushing, it would only take 41 minutes of that activity to inhale a lifetime's worth of asbestos at ambient air concentrations.[513]

ii. Exposure to Other Asbestos Products

164. Garlock presented videos of testing conducted by Dr. Boelter which purported to show how removal of asbestos-containing insulation material was necessary prior to replacing a gasket.[514]

165. The Court declines to find that such procedures were historically accurate.

166. Mr. Shoemaker testified that asbestos thermal insulation was replaced by fiberglass substitutions in the mid-1960s and asbestos-containing thermal insulation was phased

[511] *Id*. at 1671:10-14, 1679:3-11.

[512] Hr'g Tr. 484:4-485:18, July 23, 2013 (Sporn).

[513] Hr'g Tr. 1752:6-1753:13, July 30, 2013 (Templin).

[514] Hr'g Tr. 659:1-661:19, July 24, 2013 (Boelter).

out entirely in the 1970s.[515] He explained that insulation pads or "portable pads," ones that could be easily removed and reused, were typically used on equipment such as flange pumps and valves.[516] He also contended that pipefitters and machinists would not have used a hammer to remove pipe insulation because this could have damaged the various pipe components.[517]

iii. Effects of Exposure to Asbestos from Garlock Products.

167. Whether the inhalation of asbestos dust generated from the fabrication and removal of Garlock gaskets is sufficient to cause or contribute to the development of mesothelioma is a medical question.

168. If the Court were to decide the question of whether exposure to asbestos from the Garlock's asbestos-containing products can cause or contribute to mesothelioma, it would conclude that it does.

169. The Committee's medical experts persuasively rebutted the opinions of Garlock's medical experts that exposure to chrysotile asbestos dust and fibers from the use of Garlock gaskets and packing was incapable of causing mesothelioma. Well supported by a voluminous body of scientific literature, the Committee's medical experts testified that: 1) chrysotile asbestos causes mesothelioma;[518] 2) there is no safe level of exposure to any type of asbestos, including chrysotile;[519] 3) exposures to asbestos as brief as a few days can cause mesothelioma;[520] 4)

[515] Hr'g Tr. 1679:12-1680:16, July 29, 2013 (Shoemaker).

[516] *Id*. at 1682:9-1684:1.

[517] *Id*. at 1684:2-25.

[518] Hr'g Tr. 1989:14-1990:1, July 30, 2013 (Brodkin); Hr'g Tr. 2111:8-12, 2128:2-18, July 31, 2013 (Welch).

[519] Hr'g Tr. 1948:25-1949:21, July 30, 2013 (Brodkin); Hr'g Tr. 2128:19-2129:6, July 31, 2013 (Welch).

[520] Hr'g Tr. 2122:2-2123:25, July 31, 2013 (Welch).

mesothelioma is caused by the cumulative amount of asbestos exposure, and that the more a person is exposed the greater the risk;[521] and 5) asbestos exposures from fabricating and removing asbestos gaskets can result in concentrations of asbestos that are well in excess of what is found in background ambient air.[522]

170. Dr. Brodkin explained how the medical evidence established a casual relationship between the use of gaskets and packing and the development of mesothelioma through the use of the Bradford Hill causation criteria, first with regard to chrysotile and then specifically with regard to the fabrication and removal of asbestos gaskets.[523] He concluded that chrysotile asbestos in gaskets and packing is a potent risk factor for mesothelioma.[524]

171. Next, Dr. Brodkin explained the methodologies he used in determining that exposure to chrysotile asbestos dust from gaskets and packing causes mesothelioma.[525] These included three complementary methodologies: (1) taking a comprehensive occupational and environmental history; (2) applying the Helsinki Consensus criteria on attribution; and (3) evaluating the Bradford-Hill causation criteria.[526]

172. With regard to an individual's occupational history, the information for those who have worked with gaskets and packing is that any exposures that were generated from the disturbance of asbestos fibers like scraping, cutting, wire brushing, and power wire brushing,

---

[521] Hr'g Tr. 1948:6-24, 2004:9-19, July 30, 2013 (Brodkin); Hr'g Tr. 2148:4-2152:11, July 31, 2013 (Welch).

[522] Hr'g Tr. 1748:4-1753:13, July 30, 2013 (Templin).

[523] Hr'g Tr. 1951:5-1954:9, 1957:17-1958:1, 1961:1-21, 1967:7-1968:25, 1970:1-23, 1970:24-1971:22, 1973:1-16, 1979:7-1984:6, July 30, 2013 (Brodkin).

[524] *Id*. at Tr. 1989:14-1990:1.

[525] *Id*. at 1935:4-9.

[526] *Id*. at 1935:10-1936:2.

which can result in very significant airborne asbestos fiber levels.[527] According to Dr. Brodkin, for those individuals who have a defined occupational exposure to an activity generating airborne asbestos fibers, the Helsinki Consensus criteria would allow a physician to make a determination of causation, as long as that activity occurred more than ten years prior to the diagnosis of mesothelioma.[528]

173. Dr. Brodkin also discussed the evidence that supported his conclusion that the application of the Bradford-Hill causation criteria demonstrated a causal relationship between exposure to chrysotile and mesothelioma.[529] This included (1) the numerous studies that have shown a consistent increased risk of mesothelioma in cohorts exposed to predominately chrysotile fibers;[530] (2) the fact that the disease of mesothelioma does not occur until years after the exposure to chrysotile asbestos fulfills the temporality requirement;[531] (3) the many studies of chrysotile exposure that show increasing incidence of mesothelioma at greater doses like those of Rogers and Lee and Madkour in Egypt which meets the dose-response consideration;[532] (4) Dr. Brody's testimony, which addressed the considerations of biological plausibility and animal study support;[533] (5) the fact that mesothelioma is a signal tumor caused almost exclusively by exposure to asbestos satisfies the specificity consideration;[534] and (6) the fact that all types of asbestos are responsible for causing pleural plaques, non-cancerous scarring of the pleura, and

[527] *Id*. at 1940:12-1941:14.

[528] *Id*. at 1950:7-1951:4.

[529] *Id*. at 1951:5-1952:23.

[530] *Id*. at 1952:24-1954:9, 1957:17-1958:1.

[531] *Id*. at 1960:9-25.

[532] *Id*. at 1961:1-21, 1967:7-1968:25.

[533] *Id*. at 1970:1-23.

[534] *Id*. at 1970:24-1971:22.

lung cancer, without any potency difference, fulfills the considerations of coherence and analogy.[535]

174. Applying these same considerations to gasket and packing exposures, Dr. Brodkin noted studies documenting cases of mesothelioma in workers who were engaged in gasket manufacturing.[536] Such studies included an evaluation of the MacNeal-Chicago registry which discovered cases of mesothelioma not only among plant workers but in individuals who lived in close proximity to the manufacturing plant. Another study of a chrysotile packing plant revealed 17 cases of mesothelioma among its 3,000 employees, a high percentage for a disease that occurs at a rate of one in a million in the general population.[537]

175. Dr. Brodkin testified that further evidence of the connection between asbestos gasket and packing use and mesothelioma is found in the epidemiologic studies performed with the various trades that utilized these products including pipefitters, plumbers, boilermakers, machinists and mechanic repairmen.[538] Dr. Brodkin testified that numerous studies of these trades consistently demonstrated a significantly elevated risk of contracting mesothelioma.[539]

176. In evaluating the levels of exposure to gaskets and packing, Dr. Brodkin recognized that degraded gaskets can become friable and a source of airborne fibers and, thus, exposure.[540] Since the medical literature uniformly reports the lack of a known threshold of exposure below which mesothelioma does not occur, Dr. Brodkin emphasized the need to reduce

---

[535] *Id*. at 1973:1-16.

[536] *Id*. at 1979:7-12.

[537] *Id*. at 1979:13-1980:15.

[538] *Id*. at 1980:16-1981:19.

[539] *Id*. at 1981:20-1984:6.

[540] *Id*. at 1984:20-1985:4.

or prevent exposure to lower the risk of disease.[541] He noted that the governmental permissible exposure limits were designed as a practical lower limit of feasibility for measuring asbestos levels, not a measure to prevent the occurrence of mesothelioma.[542]

177. Dr. Welch testified that more than a dozen epidemiology studies conducted all over the world show an increased risk of mesothelioma in cohorts of people exposed to chrysotile asbestos.[543] Among the cohorts of chrysotile exposed workers she discussed were a series of papers relating to textile workers in China with an increased risk of mesothelioma thirty-three (33) times greater than that of the non-exposed population;[544] miners, millers and other workers at a large open air chrysotile mine in Balangero, Italy who had a statistically significant excess incidence of mesothelioma not attributable to other mineral contaminants;[545] and a group of workers in a North Carolina textile mill where eight mesothelioma cases occurred in an environment where only two air samples out of 38,000 demonstrated the presence of a commercial amphibole fiber.[546]

178. With regard to fiber potency, Dr. Welch testified that many of the studies used to calculate potency differences are out of date and contain more mesothelioma cases in the chrysotile exposed cohorts than when they were studied in the late 1990s,[547] and that in 2008, a Science Advisory Board convened by the Environmental Protection Agency to quantify the

---

[541] *Id*. at 1985:5-1986:3.

[542] *Id*. at 1986:4-1987:12.

[543] Hr'g Tr. 2113:6-2114:18, 2117:4-9, July 31, 2013 (Welch).

[544] *Id*. at 2117:10-2118:2.

[545] *Id*. at 2118:3-18.

[546] *Id*. at 2118:19-2121:11.

[547] *Id*. at 2145:4-2146:5.

differences in fiber types determined that the historical data was not sufficient to conclude that chrysotile asbestos was less potent than amphibole asbestos.[548]

179. Dr. Welch also testified that, based upon both analytical epidemiology studies and mesothelioma case series such as the Skammertiz study and the Greenberg Davies study, it has been demonstrated that asbestos exposures as brief as a few days cause mesothelioma in humans.[549] With respect to chrysotile specifically, she explained how the Madkour, Pan and Everatt studies demonstrate that very low levels of chrysotile exposure (such as living a mile away from a chrysotile plant or a cumulative exposure of 0.01 fiber per cubic centimeter) cause mesothelioma.[550]

180. The literature supporting the view that chrysotile asbestos causes mesothelioma is extensive, and every scientific organization that has studied the issue has concluded that there is a causal relationship between chrysotile asbestos and mesothelioma.[551]

181. Dr. Brody confirmed that all asbestos fibers types, including chrysotile, have been shown to cause mesothelioma as well as all other asbestos-related disease in humans.[552] Dr. Brody testified that inhaled asbestos fibers have the ability to damage the genetic composition of cells.[553] Wherever asbestos fibers travel in the human body, they are capable of causing injuries at the cellular level.[554] With respect to cancer, however, the greater concern occurs when

---

[548] *Id*. at 2093:3-2094:7, 2095:7-2096:4.

[549] *Id*. at 2123:10-25.

[550] *Id*. at 2124:4-2126:17.

[551] Hr'g Tr. 1948:10-24, 1973:17-1975:21, July 30, 2013 (Brodkin); Hr'g Tr. 2111:8-2113:6, July 31, 2013 (Welch).

[552] Hr'g Tr. 1858:13-22, 1860:1-18, July 30, 2013 (Brody).

[553] *Id*. at 1838:5-15, 1847-1857.

[554] *Id*. at 1853:24-1854:9.

asbestos fibers change the genetic material within a cell that survives and then passes on these asbestos-induced genetic errors through cellular division. Over the course of many years, this genetic damage is compounded and magnified due to additional damage to future generations of the damaged cell. Cancer develops decades later, when a single cell creating genetic errors in combination for that person results in a tumor.[555] Based on his published studies, Dr. Brody opined that chrysotile asbestos is cytotoxic to human and animal macrophages and kills cells that function as a key component of the body's natural defense mechanism.[556]

182. To support the low dose chrysotile defense, Garlock offered the testimony of three medical experts, Drs. David Garabrant, Thomas Sporn and David Weill, none of whom has a specialty in occupational medicine. Moreover, neither Dr. Sporn nor Dr. Weill has ever designed or published an original epidemiology study relating to asbestos exposed workers.[557]

183. Their opinion that chrysotile asbestos is totally innocuous and incapable of causing any disease including asbestosis, pleural plaques and mesothelioma is contradicted by peer-reviewed published literature,[558] and by Garlock's own Material Safety Data Sheet, which alerted workers that the chronic breathing of chrysotile asbestos from Garlock's gaskets could cause lung disorders such as asbestosis, pleural plaques, lung cancer and mesothelioma.[559]

---

[555] *Id*. at 1852:2-1857:25.

[556] *Id*. at 1858:23-1860:4.

[557] Hr'g Tr. 443:15-17, July 23, 2013 (Sporn), Hr'g Tr. 1016:15-19, July 25, 2013 (Weill).

[558] Hr'g Tr. 425:5-17, 445:16-19, July 23, 2013 (Sporn); Hr'g Tr. 1019:21-1020:6, 1022:2-6, July 25, 2013 (Weill); Hr'g Tr. 2104:3-2105:1; 2106:24-2111:7, July 31, 2013 (Welch).

[559] Hr'g Tr. 451:19-452:4, July 23, 2013 (Sporn).

184. Dr. Garabrant conceded that he is not an expert on translocation of asbestos fibers from the lung to the pleura nor is he an expert in lung fiber burden analysis.[560] Moreover, Dr. Garabrant conceded that in formulating his opinions in this case, he did not incorporate the results of any in vitro or animal experiments.[561]

185. Dr. Garabrant acknowledges that approximately twenty studies of plumbers and pipefitters, occupations where workers use gaskets, demonstrate a five-fold risk of developing mesothelioma.[562]

186. Dr. Weill holds the opinion that chrysotile asbestos, the type of asbestos that comprised 95 percent of the asbestos used in the United States, is totally innocuous and incapable of causing pleural plaques, asbestosis, lung cancer or mesothelioma.[563] He maintains that the only workers exposed to chrysotile asbestos who are at risk of contracting mesothelioma are chrysotile miners.[564] Dr. Weill conceded that his position is contrary to the conclusions reached by the Canadian Medical Association, the American Public Health Association, the American Cancer Society, the World Health Organization, the National Toxicology Program, the United States Public Health Service and the World Trade Organization.[565]

187. During cross-examination, Dr. Weill agreed that the use of chrysotile asbestos in animal inhalation experiments with rats caused mesothelioma.[566] Dr. Weill further conceded that

---

[560] Hr'g Tr. 364:8-15, July 23, 2013 (Garabrant).

[561] *Id*. at 327:20-328:25 (Garabrant).

[562] *Id*. at 293:22-294-9.

[563] Hr'g Tr. 1019:21-1020:6, July 25, 2013 (Weill).

[564] *Id*. at 1022:2-6.

[565] *Id*. at 1022:8-1023:3, 1024:13-1025:15.

[566] *Id*. at 1028:8-18.

in vitro studies have shown that chrysotile asbestos can produce a mutagenic event in cells and that chrysotile fibers can cause actual DNA strand breakage.[567]

188. From a physiologic prospective, Dr. Weill agreed that only the asbestos fibers that get to the pleura are the ones that cause mesothelioma.[568] Given the shorter half-life of chrysotile asbestos in the lungs, Dr. Weill agreed that researchers have found that the predominant fiber found in the pleura is chrysotile.[569]

189. Dr. Weill acknowledged that the issue of whether chrysotile causes mesothelioma has been the subject of a good-faith debate over the past twenty years both in the peer-reviewed literature and in the courtroom.[570] He further admitted that there are many qualified researchers who disagree with his opinions, including Dr. Richard Lemen, a Ph.D. epidemiologist, who concluded that chrysotile can and does cause mesothelioma after applying the Bradford Hill causation considerations; Dr. Allen Smith, another Ph.D. epidemiologist, who opined that exposure to chrysotile is the main cause of pleural mesothelioma; researchers at Mount Sinai, one of the leading institutions investigating asbestos disease, who concluded that "clinical and epidemiologic studies have established beyond all reasonable doubt that chrysotile causes cancer of the lung, malignant mesothelioma of the pleura and peritoneum;" and Dr. Leslie Stayner, yet another Ph.D. epidemiologist, who published that both the toxicological and epidemiologic literature strongly support the view that occupational exposure to chrysotile is associated with increased risk of lung cancer and mesothelioma.[571]

---

[567] *Id*. at 1034:8-13.

[568] *Id*. at 1034:14-23.

[569] Hr'g Tr. 1036:16-1039:3, July 25, 2013 (Weill).

[570] *Id*. at 1058:2-23.

[571] *Id*. at 1056:7-1057:17; *accord id.* at 1048:3-1049:13, 1054:18-1055:8.

II. CONCLUSIONS OF LAW

A. *Daubert* and Other Evidentiary Issues

190. The Debtors' Motion to Exclude or Strike Committee Medical Expert Witness Opinions, filed July 3, 2013 [Dkt. No. 2981], is denied. The Court finds Dr. Welch, Dr. Brody, and Dr. Brodkin qualified as experts. Although the Court has not ruled on medical issues, the Court found the testimony helpful and reliable.

191. The Debtors' Motion to Exclude or Strike Committee Industrial Hygiene Expert Witness Opinions, filed July 3, 2013 [Dkt. No. 2985], is denied. The Court finds Dr. Longo and Mr. Templin qualified as experts.

192. The Debtors' Motion to Exclude or Strike Committee and FCR Estimation Expert Witness Opinions, filed July 3, 2013 [Dkt. No. 2985], is denied. The Court finds Dr. Peterson and Dr. Rabinovitz qualified as experts.

193. The exhibits and deposition designations submitted by the Committee and FCR are hereby admitted.

194. All standing objections raised by Garlock or Coltec at the hearing have been, or are now, denied.

B. Legal Framework of Estimate

195. The goal of this estimation proceeding is "a reliable and reasonable estimate of the aggregate amount of money that Garlock will require to satisfy present and future mesothelioma claims."[572] Consistent with fundamental bankruptcy principles, the Court must

[572] Est. Order ¶ 10.

determine what it would cost Garlock to resolve present and future asbestos claims if they were not in bankruptcy.[573]

196. As previously set forth in its Estimation Order, this estimation "for allowance purposes pursuant to section 502(c)."[574] However, that purpose is qualified in that the Court "does not expect to 'allow' any individual or group of claims. Rather, it proposes to estimate the aggregate amount necessary to satisfy present and future claims that may be allowed at some later point in the case."[575]

197. This qualification preserves the rights of claimants and recognizes the jurisdictional limitations of the Court. To conduct allowance proceedings for purposes of distribution would implicate individual claimants' due process rights. A bankruptcy court is precluded from liquidating or estimating contingent or unliquidated personal injury or wrongful death claims against the estate for purposes of distribution.[576] However, "an estimation of asbestos liability for the limited purposes of plan formulation is a fruitful endeavor because it promotes the speed and efficiency goals of the Bankruptcy Code, while not implicating the procedural rights of the individual claimants."[577]

---

[573] *See Owens Corning v. Credit Suisse First Boston*, 322 B.R. 719, 722 (D. Del. 2005) ("claims are to be appraised on the basis of what would have been a fair resolution of the claims in the absence of bankruptcy"); *In re Federal-Mogul Global, Inc.*, 330 B.R. 133, 158 (Bankr. D. Del. 2005) (object is to determine "what a claim would have been worth but for the bankruptcy").

[574] Est. Order ¶ 9.

[575] *Id.* ¶ 11.

[576] 28 U.S.C. § 157(b)(2)(B), (b)(5). *See also* 28 U.S.C. § 1411(a) (preserving in bankruptcy claimants' right to jury trial of personal injury tort and wrongful death claims).

[577] *Federal-Mogul*, 330 B.R. at 154-55.

198. The estimation cannot be an exact determination of present or future liability. "[A]n estimation by definition, is an approximation."[578]

199. The evidence is unrebutted that the method Garlock used to resolve mesothelioma claims in that system was not trial, but rather settlement of those claims supported by a diagnosis of mesothelioma and evidence that the claimants worked with or around Garlock's asbestos-containing products. By such settlements, Garlock converted disputed, unliquidated tort claims into consensual obligations to pay agreed sums of money.

200. If Garlock remained in the tort system, it would continue to resolve mesothelioma claims in this manner. Garlock has provided no evidence that would enable the Court to predict that Garlock's future in that system would be materially different from its historical experience in the latter half of the decade of the 2000s.

201. Garlock's attempt to discredit its claim resolution history as a proper foundation for aggregate estimation is not persuasive. The Court accepts that Garlock's claims data and settlement data, as interpreted by experts in light of Garlock's claims management practices, provides a reasonable basis for aggregate estimation.

202. In estimating liabilities where the interests of equity holders are pitted against those of creditors, the limitations on the accuracy of estimation imply that the Court should be conservative, that is, that doubts should be resolved in favor of the creditors because their rights are superior and they are entitled to be paid in full before equity may retain any interest. Congress enacted the Absolute Priority Rule in 11 U.S.C. § 1129(b) to meet "the danger inherent

[578] *Federal-Mogul*, 330 B.R. at 155. Especially where valuation requires "a prediction as to what will occur in the future, an estimate, as distinguished from mathematical certitude, is all that can be made." *Consol. Rock Prods. Co. v. Du Bois*, 312 U.S. 510, 526 (1941). *See also Owens Corning*, 322 B.R. at 725 ("mathematical precision cannot be achieved").

in any reorganization plan proposed by a debtor, then and now, that the plan will simply turn out to be too good a deal for the debtor's owners," and to ensure that debtors and insiders cannot "use the reorganization process to gain an unfair advantage."[579]

C. Estimate of Aggregate Liability for Mesothelioma Claims

203. The methods applied by Dr. Peterson and Dr. Rabinovitz to produce estimates have previously been adopted by a number of courts estimating liability for asbestos claims.[580]

204. The Court finds the methods used by Dr. Peterson and Dr. Rabinovitz to be reliable and appropriate for this estimation.

205. The parties agree that 2.5 percent per annum is a reasonable inflation assumption for forecasting the value of future claims, and the Court so finds. The discount rates used by Dr. Peterson and Dr. Rabinovitz are "risk-free" rates as required by applicable precedent.[581] Mesothelioma claimants are not investors who should be deemed to accept risk in order to gain a higher return.[582] The task at hand, moreover, is to measure the aggregate value of payments to be made on allowable claims, taking into account the time value of money. The discount rates used by Dr. Peterson and Dr. Rabinovitz are substantially consistent with the discount rate used in the *Bondex* case. There, a risk free rate of 3.45 percent was used to discount future liabilities

[579] *Bank of Am. Nat'l Trust & Sav. Ass'n v. 203 N. LaSalle St. P'ship*, 526 U.S. 434, 444 (1999).

[580] *See In re Specialty Prods. Holding Corp.*, 2013 WL 2177694, at *23 (Bankr. D. Del. May 20, 2013) (***"Bondex"***); *In re Armstrong World Indus., Inc.*, 348 B.R. 111 (D. Del. 2006); *In re Federal-Mogul Global Inc.*, 330 B.R. 133, 133-34 (D. Del. 2005); *Owens Corning*, 322 B.R. at 725; *In re Eagle-Picher Indus., Inc.*, 189 B.R. 681, 686-87 (Bankr. S.D. Ohio 1995).

[581] *Jones & Laughlin Steel Corp. v. Pfeifer*, 462 U.S. 523, 537-38 (1983) (quoting *Chesapeake & Ohio R. Co. v. Kelly*, 241 U.S. 485, 491 (1916)).

[582] McGraw Report at 4-5.

back to Bondex's petition date of May 31, 2010, within two weeks of the equivalent date in this case.[583]

206. The Court finds Dr. Bates' principal method to be unhelpful here because, first, it estimates Garlock's liability under conditions that do not correspond to the current tort system. In addition, the assumptions built into Dr. Bates methodology, such as the number of shares that a verdict would be divided into and the rate at which plaintiffs would win trials are not adequately tied to Garlock's experience in the tort system.

207. Dr. Bates' secondary method, in which he estimates Garlock's liability under the bankruptcy plan it proposed in late 2011, is premature and inappropriate. First, the plan itself may be unconfirmable as a matter of law.[584] Setting that possibility aside, how the asbestos creditors' entitlements may be adjusted under a plan of reorganization is an issue that has not yet been presented. To take into account Garlock's bankruptcy in estimation now would introduce a premature discount of the claims. As a general matter, the fact of bankruptcy cannot be used to reduce the value of the claims faced by the debtor on the petition date.[585] Consistent with that principle, in estimating asbestos claims, the law is clear that the Court is to measure the aggregate amount of the claims in the tort system, not "the value which claimants might take in

[583] *Bondex*, 2013 WL 2177694, at *25.

[584] For example, the Committee filed objections to the disclosure statement arguing that the plan is unconfirmable for a variety of reasons. Objection of the Official Committee of Asbestos Personal Injury Claimants to the Debtors' Proposed Disclosure Statement, filed January 19, 2012 [Dkt. No. 1808]. The Court has not yet ruled on those objections, but finds that they raise important issues.

[585] For example, in a bankruptcy solvency analysis, a company's bonds must be valued at the face amount of the obligations, not discounted because of the debtor's financial distress and descent into bankruptcy. *In re Trans World Airlines, Inc.*, 134 F.3d 188, 196-97 (3d Cir. 1998).

satisfaction of their claims through some bankruptcy mechanism such as a trust of the sort provided for at § 524(g)."[586]

208. Dr. Bates' and Dr. Gallardo-García's criticisms of the methodologies and estimates put forward by Dr. Rabinovitz and Dr. Peterson are not persuasive.

D. Medical and Science Issues

209. Whether the foreseeable use of Garlock gaskets generated appreciable dust and whether that dust is capable of causing mesothelioma are factual questions for a jury to resolve, not matters to be decided as a matter of law by this Court.[587]

210. The Court does not need to make determinations on these issues.

211. The strengths and weaknesses of the medical and science defenses are already priced into historical settlement values, and no further adjustments to the estimation to account for those defenses are necessary.[588]

E. Conclusion

212. The Court finds the estimate of Dr. Peterson the most persuasive and therefore estimates the pending and future mesothelioma claims against Garlock, in the aggregate, at $1.265 billion in net present value.

SO ORDERED.

_____

George R. Hodges,
United States Bankruptcy Judge

[586] *Eagle-Picher*, 189 B.R. at 683.

[587] Hr'g Tr. 1239:13-1241:9, July 26, 2013 (Brickman); Hr'g Tr. 1058:19-23, July 25, 2013 (Weill).

[588] *See Federal-Mogul*, 330 B.R. at 161-62.